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DR. JARDINE having received the following Communication from his friend Dr. RUSH, of Philadelphia, requests the Editors of the Medical and Physical Journal will insert it in their next Number.

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An Inquiry into the Functions of the Spleen, Liver, Pancreas, and Thyroid Gland; by BENJAMIN RUSH, M.D. *Professor of the Institutes and Practice of Medicine, in the University of Pennsylvania.*

OF THE FUNCTION OF THE SPLEEN.

FOUR uses have been ascribed to the spleen. It has been said to prepare the blood for the secretion of bile from it by the liver; to be the organ in which the red globules of the blood are formed; to be a counterweight to that of the liver, on the left side; and lastly, to afford an occasional supply of blood to the vessels of the stomach which secrete the gastric liquor, when that viscus is unduly distended with food. If the use I am about to ascribe to the spleen be admitted, it will be unnecessary to state objections to the opinions which have been mentioned.

I shall begin this inquiry by delivering the following proposition.

All the motions which go forward in the human body are produced by external and internal stimuli. These stimuli exert their influence directly, or indirectly, upon the blood-vessels. From innumerable causes, they are liable to become *excessive* in their force. Such is the excess of this force, and such the frequency of its occurrence

from exercise, labour, intemperance, passions of the mind, and disease, that a provision to defend the tender and vital parts of the body from the effects of this force, seems to be a necessary appendage to the body. This provision, I believe, to be the SPLEEN. My reasons for this opinion are founded upon the following facts.

1. The *structure* of the spleen. It contains but one artery, and that a large one, with veins that ramify through every part of it. This artery is larger than that of the liver, which is four times as large as the spleen. It is moreover, stronger, according to Dr. Wintringham, than the aorta, from which it is derived, in the ratio of 1212 to 1000. Its veins possess a peculiar and specific strength, which assists in performing the office I have assigned to it. In having but one artery, it differs from those viscera, which have certain offices to perform upon the blood. These viscera are the lungs, the liver, and the heart, each of which has an artery intended for the exclusive purpose of its nourishment. The spleen having no work to perform upon the blood, and serving no other purpose than a temporary reservoir for it, is nourished by its single artery. Another artery would have been superfluous to it. It has, moreover, no excretory duct. Its texture is soft and spongy, and of so distensible a nature, that it will admit of an increase in its weight from blood to three or four pounds, according to Dr. Baillie, without discovering the least mark of a departure from its natural state, in which it contains about a pound of blood.* It is from the facility with which it is distended, that it has been compared to the corpora cavernosa penis.

2. The *situation* of the spleen. It is placed near the heart, the centre and prime mover of inordinate and violent motions in the blood-vessels, and in a part of the belly, in which from the frequent and lax state of the stomach and bowels, and from the disproportionate space it occupies, to its size, it is capable of more prompt and greater distention, than it could have had in any other part of the body. To enable it always to retain its distensible power, it is never lessened in its size by fat.

3. The

* In an account of a dissection, communicated to Dr. Duncan, by Mr. James Elliot, he says, "the Spleen was found, when taken from the body, to weigh eleven pounds thirteen ounces," and that its texture, figure, and bluish colour, were little, if at all, changed." *Medical Commentaries.*

3. The phenomena which take place in several of the common exercises of life. Where is the school-boy who after running for fifteen or twenty minutes, in the ordinary plays of schools, has not felt a pain in the left side? This is so great sometimes as to compel him to sit down half bent, and even to make him cry out for relief. The name of this pain, I well recollect, indicated its cause. It was the "spleen." In laughing, the spleen performs the same kind office of opening a waste gate, for the torrent of blood excited into action, by the violent and excessive agitation of the blood-vessels; hence we so often observe persons in paroxysms of laughter, press upon the left side, to lessen the pain produced by the distension of the spleen, and hence too, the phrase of "splitting the sides with laughing." It is the left side only that is in danger of bursting, and the spleen only, in this side. When sudden death occurs from laughing, it is probably induced by a rupture of the spleen, an accident which has, now and then, dissections teach us, occurred from other causes. The pain in the left side, which is felt in riding a hard-trotting horse, appears like that which is induced by running, and laughing, to arise wholly from an undue distention of the spleen. In all these cases, it performs the office of a bason, held by the hand of nature to receive, for a while, several pounds of blood, in order to preserve the system from disease and death. It is only when the spleen is distended to the extent of its capacity of retaining blood, that it imparts a sense of pain, for I shall say presently, it possesses but little sensibility in proportion to the number of its nerves.

4. The *quality* of the blood which has been procured from it. It is less coagulable than blood obtained from the arm by bleeding, or discharged from wounds. I have ascribed this to the force with which it is thrown into the spleen, or to the feeble action of the veins, in propelling it back again into the circulation, both of which we know impair the coagulable quality in the blood. I am aware this quality in the blood is denied by Dr. Saunders, but he opposes to it only a single experiment, made under circumstances which do not contradict the numerous experiments of several other, equally respectable physiologists.

5. The nature of the diseases which produce obstructions in the spleen. These are fevers of all kinds. Dr. Jackson says, that in all the soldiers whom he opened, who had died of the yellow fever at St. Domingo, he found the "spleen full, and ready to burst, or lax, and filled

filled with grumous blood." In nearly an hundred persons who died of the bilious tertians of Minorca, whose bodies Dr. Cleghorn examined after death, he found the spleen "large, sometimes weighing four or five pounds, and so excessively soft and rotten, that it had more the appearance of congealed blood, wrapped up in a membrane, than of an organical part." The same excellent physician tells us, that in a number of persons who died of the dysentery, he found the spleen in most of them "more or less in a putrid condition," induced probably in both cases, by the great force or quantity of blood thrown into it by those two diseases. Morgagni says, "an enlargement and obstructions in the spleen are generally found in persons who die of chronic fevers." The excitement of the blood-vessels by the undue exercises of the faculties of the mind, produces the same morbid affections of the spleen. This has been proved by Dr. Prost, who found it diseased in seventeen out of eighteen maniacs, whose bodies he examined after death. The effects of the malignant passions, in a more especial manner in disordering the spleen, are admitted in common conversation, by our calling a *malicious*, a *splenetic* man. It has been remarked, that in persons who die suddenly, the spleen is found to be of its natural size. The sudden destruction of the excitement of the blood-vessels in these cases, does not give the spleen time enough to open its friendly door, to receive the excess of the stimulus which thus destroys life, by abstracting from them for a while, three or four pounds of blood.

6. The disease which most commonly follows an enlarged, or obstructed spleen, and that is hemorrhage. Hippocrates long ago ascribed a bleeding from the nose, to an obstruction of the spleen. Vanswieten says, he once attended a patient, in whom an uneasiness and tension of the spleen, enabled him to predict a return of the same disease. Lieutaud mentions nine cases of persons dying with hemorrhagies, in whom the spleen was found after death, diseased from enlargement, and what he calls putrefaction. Four of those hemorrhagies were from the nose, the others were the stomach, bowels, and hemorrhoidal vessels. There are few physicians that cannot subscribe to the connection between hemorrhagies and obstructions of the spleen. I think I have observed them most frequently to occur from the liver and stomach.

7thly and lastly. The diseases which follow the loss of the

the spleen, whether by accident or design, in men, and other animals. These are an enlargement of the liver, flatulency, indigestion, head-ach, and an increased secretion of saliva, urine, and semen.

I might here take notice of the existence of a spleen, in all classes of animals, as a proof of its being intended for the purpose I have mentioned. I might likewise point out the difference of the spleen in the human species, from that of brutes, consisting chiefly in a texture calculated to afford more promptly and freely, a receptacle for the blood, when exerted into tumultuous motions; but this would lead me from the subject of the present inquiry. I have supposed this difference, so favourable to the quick distension and capacity of the spleen in the human species, to have been necessary, in consequence of our blood-vessels being more exposed to excessive motions than those of inferior animals, through the medium of our greater portion of mind.

How far the spleen may act by absorbing and suffocating undue impressions upon the nervous system and the mind, I know not; but I think it probable, it serves this important use in the animal economy. My reasons for this opinion are founded upon the great number of nerves which belong to the spleen, compared with its size, and upon its feeble sensibility. It is seldom inflamed, and when it is, the inflammation is attended with but little pain. Even wounds of the spleen are painful in a very feeble degree.

Upon taking a view of the manner in which other parts of the body are guarded from the evils of excess in quantity and motion, we shall be more readily induced to admit the facts and reasonings, in favour of the use of the spleen, which I have mentioned. The eye is kindly defended from the evils of redundant light, by its black pigment; the liver from redundant bile, by a gall-bladder; the blood from redundant oil, by cells; and the numerous cavities of the body, from redundant lymph, by a system of absorbents, happily calculated for that purpose. Why should not the blood-vessels possess a similar advantage to protect themselves from destruction, by means of a temporary reservoir of their redundant motions, or quantity of blood? They would have been imperfect without it; and were it possible for the brain, the liver, the stomach, and the bowels to express an opinion upon this subject, I believe they would say, they owed the preservation of their blood-vessels from rupture and obstructions, and of

their nerves from disease in a thousand instances in the course of an ordinary life, to the prompt and friendly offices of the spleen; and were it possible for this long-degraded, and ever-insulted viscus, to obey the call to inanimate nature to praise its Creator, I believe it would raise as high a note in honour of his wisdom and goodness as the eye, or the ear, or any other noble and obviously useful part of the human body.

I shall dismiss this physiological view of the function of the spleen, by briefly hinting at its application to pathology, and the practice of physic.

1. We are taught from the use that has been assigned to it, the necessity of blood-letting in all those diseases in which it has been found to be unduly distended with blood. Death is probably, in these cases, the effect of an inability in the spleen to afford a reservoir for a quantity of blood, sufficient to lessen the inordinate motions excited by it in the system.

2. We are led by the opinion that has been delivered, to suspect obstructions to exist in the spleen, in all habitual hemorrhages, more especially when they occur from the stomach, liver and nose, and to rely not less upon astringent, than deobstruent medicines, in our attempts to cure them. I am happy to find there are precedents in favour of this practice. Donatus and Vogel, mention cases of a vomiting of blood being cured by removing obstructions of the spleen.

3. The use that has been assigned to this viscus, should lead us to suspect that many of the diseases of the liver, stomach, lungs, and brain, are the effects of obstructions in the spleen, and to employ suitable remedies to remove them. I am the more disposed to inculcate this suspicion from a fact related by Dr. Prost, in his excellent work, entitled "Médecine eclairée par l'observation, et l'ouverture des corps." He says, of thirty-eight persons who died of pulmonary consumption, he found the spleen enlarged from two to six times its natural size, in one half of them. This is probably often the case when that disease is attended with a spitting of blood. It is possible, the efficacy of a salivation in curing it, may depend in part, upon its restoring the natural and healthy function of the spleen.

Of the Function of the Liver.

The design of the liver, I believe to be, to receive the blood from every part of the body, in order to subject that

part

part of it, which had not been completely animalised, or divested of its chylous properties, to a secretory process, and afterwards to pour the product of this secretion, mixed with the liquor of the pancreas, into the duodenum, to be absorbed, or otherwise taken up by the lacteals, and conveyed with the chyle from the stomach into the blood-vessels, in order to be completely converted into red blood, for the purpose of serving the various and important uses, for which that fluid is intended in the human body.

The facts which have led me to adopt this opinion, are as follow.

1. The liver is present in nearly all animals. In this respect, it is upon a footing with the stomach. Of course there is reason to suppose it is designed to perform an office in the system, equally necessary with the stomach, to the support of life. It is no objection to the truth of this remark, that in some animals there is no gall-bladder attached to the liver, and that in others, it discharges its contents into the stomach, or the bowels remote from the liver; for I hope to shew presently, that the cystic and hepatic bile, serve very different purposes in the animal economy.

2. The immense and disproportionate size of the liver, in the fœtus, compared with its size in adults, the design of which appears to be, that nourishment may be carried on exclusively by that viscus, without any aid from the stomach.

3. The size of the liver in adults, and the quantity of bile which is secreted, supposed by Dr. Haller to be four and twenty ounces in four and twenty hours; five-sixths of which he supposes, pass directly into the duodenum. It is not probable this large apparatus, and copious secretion, can be of an excrementitious nature, and I shall hereafter mention some facts to prove, that it is not essential to the production of the chyle that descends from the stomach, and that it is effused, subsequent to the chyle having passed by the duodenum.

4. Chyle is found in the blood, after it has passed through the lungs. This has often been observed, when it has been drawn, soon after a full meal. It has likewise been demonstrated by Dr. Hutchinson, in his inaugural dissertation, upon "the conversion of chyle into the blood," published in the year 1804, by a number of experiments, made upon the blood of living dogs. The chyle in these cases, partakes too much of the nature of the aliments from which it is formed to be changed into blood

blood in the lungs, by the action of the air upon it, without undergoing a second chylopoetic process in the liver.

5. The quality of the venous blood, from which the hepatic bile is secreted. It is less disposed to putrefaction than arterial blood, taken from any other part of the body. This has been ascribed by Dr. Caldwell, to its having parted with its oxygen. It is possible this may be one of the causes of its being less putrescent than arterial blood; but I am disposed to ascribe it chiefly to its containing a quantity of imperfect chyle, which we know passes more slowly into a putrid state than blood. That this is the case, has been proved accidentally by Dr. Hutchinson, by an experiment made without any reference to this subject, or even to that of his dissertation; also by an experiment, made by Dr. Rollo, in which he found the blood of a man in a diabetes, to be less putrescent than the blood of a person in health. In that disease, we know the blood contains a preternatural quantity of chyle, often so great, as to discover itself, not only in the urine, but in several other of the secretions. Dr. Haller says, he has seen fat in the vena portarum. I suspect the matter he supposed to be fat, was a portion of imperfect chyle.

6. The quality of the hepatic bile. Dr. Boerhaave, who says, he had tasted it, asserts that it is "mild, sweetish, and watery. Dr. Haller says of it, "dulcior hepatica bilis, cystica amara;" but he adds, that he found a considerable bitterness in it, in a man who had been hung, and in a woman who had died suddenly. In both cases, this bitterness was probably imparted to it in the act of dying, by a mixture of cystic bile with it. In animals, which have no gall-bladder, the Doctor admits the hepatic bile to be "uniformly sweet." It is certain the livers of those animals, which form a part of our aliment, have not the least bitter taste, except in those cases in which the contents of the gall-bladder have accidentally fallen upon them, in the act of dressing them for the table. The hepatic bile is always sweet in new-born infants. By a chemical analysis, even the cystic bile of an adult, yields a portion of albumen, which we know to be one of the component parts of the chyle.

7. There are several experiments related by Dr. Fordyce, which prove chyle to be formed by the action of the saliva and gastric juice upon the aliment, without the mixture of hepatic bile with it. The Doctor tied up the ductus communis of an animal, and found the chyle afterwards to possess its usual healthy properties. The same healthy

healthy and natural state of the chyle has been observed in those cases, when, not only the excretion, but the secretion of bile has been suspended by that torpid state of the liver, which has lately received from Dr. Pierson, the appropriate name of Hepatalgia.

8. The structure, situation, and function of the PANCREAS. It resembles the salivary glands in its structure; it secretes a liquor, which possesses the same dissolving and animalizing properties as the saliva, and it pours this liquor so directly upon the hepatic bile, in the common duct, before it enters the duodenum, as to act upon it in a concentrated state, and thereby to change it into perfect chyle. By ascribing this use to the Pancreas, we rescue it from its insignificant office of performing a work of supererogation only to the saliva and gastric juice, and give it a little sovereignty or independent jurisdiction in the animal economy.

9thly and lastly. I infer, that a second chylopoetic process goes forward in the liver, from the effects of intemperance upon it. It increases its labour, and thereby increases its size. This has often been observed in full feeders. But it does more. It produces a preternatural secretion of bile, more especially when aliments consist of an undue proportion of fat substances, which resist the powers of digestion in the stomach. When this labour has been long imposed upon the liver, we observe it to succumb like the stomach under hard usage, and to produce, with its diseases, the same morbid affections in other parts of the body.

Let us next inquire into the use of the gall-bladder, and the cystic bile.

From the situation of the gall-bladder, from the acute angle its duct makes with the hepatic duct, where they form the ductus communis, and from the circumstances which influence its fulness and depletion, I believe it to be intended wholly to serve the same purpose with respect to the liver, which the spleen serves to the whole sanguiferous system, that is, to afford a receptacle for redundant bile, and thereby to prevent the obstruction of the hepatic bile into the duodenum, and its regurgitation into the pori biliarii. Unless this provision had been made for an excess in the secretion of bile, to which so many accidental causes contribute, the liver would have been exposed to disease and disorganization every day. It is possible, the less nutritious particles of the hepatic bile may be thrown into the gall-bladder; but whether this be the case, or not, the

bile

bile appears to undergo a putrefactive process in it. I infer this, from the bitterness it acquires during its stagnation in the gall-bladder. The same bitter quality is the offspring of the putrefaction of certain vegetables, and of some animal substances. It probably takes place in other secretions of the body. Dr. Darwin ascribes the bitter taste we often perceive upon the tongue, to a morbid change in the quality of the liquor, which is secreted upon its surface; and perhaps the bitterness of the wax, which is secreted in the meatus auditorius is derived from a change induced in it, by its stagnation, similar to that which occurs in the bile. It is true, the bile is less putrescent than the blood, according to an experiment made by Dr. Saunders, and since repeated by a graduate, in the University of Pennsylvania; but the same indisposition to putrefaction takes place in certain vegetables, after they acquire, by decay, a bitter taste. Of the truth of this remark, I satisfied myself by the following experiment. Into a two-ounce phial, I put half an ounce of beef, cut into small pieces, with the same quantity of the rotten and bitter part of an apple, and an ounce of water. Into another phial, I put the same quantity of beef and water, and placed them both under the same circumstances of heat. The latter putrefied many hours before the former. Had the rotten part of the apple been exposed alone to heat and air, I have no doubt it would have undergone another putrefaction. The same remark applies to the bile, out of the body. Even the fæces undergo a similar change, and hence we find them inoffensive, as remote causes of disease, unless they have been exposed long enough to the action of the sun and air, to excite in them a second putrefaction. While I suppose the bile to be of an excrementitious nature, I admit that it serves several valuable purposes in the animal economy. In stimulating the bowels, it enables them to propel their contents downwards, and imparts to them at the same time a tone, which is communicated to the whole system. It serves likewise, to precipitate those parts which are incapable of affording nourishment to the body from the chyle; and perhaps, it retards its tendency to putrefaction, especially in hot weather. Should the bile exert this antiseptic quality, it will only be upon a footing with the nitrate of potass and ammonia; both of which, although the offspring of putrefaction, have a powerful effect in preventing it.

The liver has been called, by some physiologists, a secretory, and by others, an excretory organ. The reader will perceive,

perceive, that I adopt both these opinions. The hepatic duct discharges its secretion, and the cystic duct its excretion into the duodenum. The gall-bladder appears to be to the liver, what the colon and rectum are to the stomach; the receptacle only of hepatic fæces. The quantities of each, accord with the excess or deficiency of aliment taken into one, and of imperfect chyle received and secreted by the other.

From a review of the function of the liver, which has been delivered, we are led, in the first place, to admire the goodness of the Creator of our bodies, in thus providing two viscera for preparing the matter, which is necessary to repair their daily waste, each of which is provided with an ample apparatus for that purpose. The nourishment of the body is, in this respect, upon a footing with the double senses of vision and hearing. In cases of sickness, indigestion, or long fasting, in which the office of the stomach is suspended, the liver performs a vicarious duty; and when its chylopoetic office is impaired, or interrupted, the stomach, by performing its functions with double care, prevents the evils of an abstraction of nourishment from the body. But there is another instance of alternation between the stomach and liver, in their respective offices. While the former is most busy, the latter, from the pressure of the stomach upon it, is most idle. It is only after the chyle from the stomach has passed by the duodenum, that the liver pours its chyle into it. In this way the bowels and the lacteals are kept in a constant state of moderate tension and activity. The same distention and pressure of the stomach, which impedes the secretion of hepatic chyle, squeezes the cystic bile from the gall-bladder; by which means it is enabled to perform one of the offices I have ascribed to it: namely, to separate the fæcal matters from the chyle. From the situation of the gall-bladder in the concave part of the liver, the pressure of the stomach is necessary to elevate its bile to the level of the cystic duct, in an erect posture of the body. In a recumbent posture, the bile descends more easily into the duodenum, especially in lying upon the back. It is from its more copious effusion into the bowels during sleep, that the practice of going to stool in the morning, has been one of the habits of the human body in all ages and countries. It is from the same cause that persons who are afflicted with an excessive secretion, and excretion of bile, are most apt to be sick, or puke bile in the morning.

I am aware that I differ from all modern and ancient physiologists,

physiologists, in supposing that the pressure of the stomach upon the liver, suspends the secretion of bile. I infer it, because pressure suspends secretion in all other glands. We often see it in the kidneys from the pressure of the colon, when distended with fæces upon them. The current opinion of the secretion of bile being increased by the pressure of the stomach upon the liver, took its rise in a belief that its mixture with the aliment in the duodenum, was necessary to constitute chyle. The reader will perceive further, that I do not admit of the gall-bladder being filled by the regurgitation of hepatic bile, in consequence of an obstruction induced upon the ductus communis by the distention of the duodenum. I suppose it to be filled only when the liver secretes and pours its bile in too large quantities to be conveyed into the bowels. In this case, it affords the same relief to the liver, that the spleen affords to the blood-vessels, by becoming its waste-gate. Perhaps the passage of the bile into the gall-bladder, may be assisted by the fibres of the muscular coat of the cystic duct, performing their actions in that direction. In this way we know many fluids are propelled, contrary to their gravity, in different parts of the body.

2. The economy of the double process which has been described for preparing the nourishment of the body, deserves our notice. Had it been otherwise, all that portion of chyle, which was incapable of being made into blood, by passing through the lungs, would have been lost to the system. If the office I have assigned to the liver, be correct, it may be compared to the second bolting cloth of a *mill*; or perhaps, more properly, a frugal housewife, who collects all the meat which has refused to yield its nourishment to a single operation of fire; and by cooking it a second time in other vessels, and by other modes of heat, extracts from it a second portion of nourishment.

3. From the opinion of the use of the liver which has been delivered, we are enabled to understand the reason, why we often observe large and offensive fæcal discharges, in persons who have eaten little or no food. I have frequently seen them with surprise in children, while labouring under the colera infantum, who had passed many days without retaining a spoonful of aliment, or even of water, upon their stomachs. The same remark is made by Dr. Cleghorn, in his account of the dysentery at Minorca. It is so pertinent to our subject, that I shall insert it in his own words. After mentioning the exhibition of purges, he says, "They brought off a prodigious quantity of round hard

hard fœtid lumps, to the great relief of the patient; nor is it easy to conceive how so much had been collected, or where it had been lodged so long; as in some cases I have observed the patients have eaten nothing for two or three weeks, that could furnish much excrement; and during that time had taken several glysters and common cathartics, which brought away liquid stools." From the disposition which the bile has to form itself into solid substances, or what are called gall-stones, I am disposed to believe that the lumps taken notice of by Dr. Cleghorn, or what we call Sybala, are always composed of hepatic fæces. The meconium of children appears to be formed from them.

4. The use which has been ascribed to the liver, leads us to discover the reason why a diseased state of the stomach is so often followed by a diseased state of the liver. When the former performs its work of digestion imperfectly, it imposes double labour upon the latter, in preparing the chyle for the nourishment of the body, and this necessarily brings on disease.

5. It has often been remarked, that the digestive process in the stomach required a healthy and tranquil state of the whole system. The same thing may be said of the chylopoetic process in the liver. It is impaired by all general, and by many local diseases. It suffers, according to Dr. Mosely, in all the acute and chronic diseases of the West Indies. Dr. Paley ascribes to it, the same sympathy with all the diseases of the East Indies. Dr. Boerhaave supposed it to be affected, in ninety-nine out of a hundred chronic diseases, from all their causes. There is scarcely a disease in the head, so light, that does not disturb its natural actions in a greater or less degree.

6. Children are often affected with a sudden swelling and hardness of their bellies, which as suddenly subside from the operation of a purge, or from friction with the hand. It has been ascribed to wind, also to worms in their bowels. May it not be occasioned by a temporary engorgement of the liver, brought on by an excess of aliment taken into the stomach, and by a redundant quantity of chyle prepared from it?

The opinion that has been delivered of the function of the liver, is calculated not only to explain the causes and phænomena of several diseases, but to suggest several inferences that may be useful in the practice of physic.

1. Has the liver been elevated from its former humble and tributary situation in the system, to share with the stomach

stomach in the high and important office of preparing nourishment for the body? Let us never forget to inquire into its state, with the same solicitude that we inquire into the state of the stomach in all general diseases.

2. Has a sympathy been pointed out between the stomach and liver in their respective offices? Let us suspect their diseases to be reciprocal. The influence of the liver, when diseased, in bringing on stomach complaints, is well known; and Dr. Thomas Clark has informed us, in his "Observations upon the Diseases of the West and East Indies," that a diseased stomach is the constant, and often the first, sign of a diseased liver in that country.

3. Do we wish to reduce the system by the *sudden* abstraction of nourishment? In vain shall we attempt to do so, by limiting the quantity of aliment taken into the stomach, while the liver continues to supply the lacteals with alimentary matter. It can only be effected by combining active purges with abstinence from food.

4. Do we often meet with a preternatural secretion and excretion of bile appearing in headach, languor, sickness, puking of bile, and an occasional diarrhœa? I have taken the liberty to call this disease, a diabetes of the liver, and have supposed it to depend upon original debility, and increased morbid action in its secretory and excretory vessels. It occurs in the gout, in persons habitually intemperate, and in the season of bilious fevers in all warm countries. It yields to evacuating or tonic remedies, according to the state of the system.

5. Do we now and then meet with a bilious diarrhœa, attended with the appetite and digestion unimpaired? I have called this disease a lientery of the liver, and have supposed that the chyle passes through it into the bowels, without undergoing the change that is necessary to procure its admission into the lacteals. The remedy in this disease is depletion, more especially by abstracting nourishing aliment. I have known it to yield to a diet consisting wholly of vegetables, after purges and the most powerful astringents had been used to no purpose.

6. Does the formation of sound and healthy blood depend upon the healthy action of the liver? and does the liver suffer, more or less, from all general and many local diseases? It follows, of course, that a medicine which is said to act specifically upon glandular parts of the body, and which is known to act powerfully upon the liver, occupies deservedly the first rank of all the articles in the Materia Medica. Such a medicine is mercury, and hence its

its usefulness and fame in all general and chronic diseases.

7. Is the stomach, from disease, unable to retain or digest aliment, or is its passage into the stomach, or duodenum, obstructed by schirrus, or any other cause? The use that has been assigned to the liver, should lead us to double our exertions in conveying aliment into the system, by means of injections into the lower bowels. It has been objected to this mode of nourishing the body, that aliment, when absorbed, could not perform that office without being converted into chyle, and that this liquor was prepared exclusively by the stomach. We now see a change of aliment into chyle may be performed, independently of the stomach, by means of the liver.

Of the Functions of the Thyroid Gland.

The design of this gland, I believe to be to defend the brain from the morbid effects of all those causes which determine the blood into it, with unusual force.

My reasons for this belief are founded, 1st. upon its situation and structure. It is seated upon the anterior parts of the larynx, and is supplied with four large arteries, which return their blood by means of veins, without terminating in an excretory duct, or producing any thing like a secreted liquor.

2. Upon its larger size in women than in men. This provision was necessary to guard the female system from the influence of the more numerous causes of irritation and vexation of mind, and the more acute bodily diseases, to which they are exposed, than the male sex. The sensation known by the name of globus hystericus, appears to be produced by the diversion of excessive mental impressions from the brain to the thyroid gland. We often observe it to be considerably enlarged in hysterical paroxysms. A remarkable case of this kind, is taken notice of by Dr. Whyt, in his treatise upon nervous diseases. It is probably from the greater size, and more frequent excitement of the thyroid gland in women than in men, that the former are more subject to Bronchocele than the latter.

3. Upon the effect of certain exercises of the body and mind, upon the thyroid gland in its diseased state. Dr. Broadbelt relates in his inaugural dissertation upon bronchocele, published in Edinburgh, in the year 1794, that such of the inhabitants of Derbyshire, in England, as are afflicted with that disease, are subject to a pain in the gland,

gland, and to an increase of its size when they are unusually excited by running or anger.

4. Upon the effect which disease in the thyroid gland, and its loss, have upon the brain. The bronchocele of the Cretins is generally accompanied with imbecility of mind; and Dr. Chapman informed me that Mr. Cooper, Surgeon of St. Thomas's Hospital, in London, had produced something like fatuity in several dogs, by extirpating this gland.

It is possible this gland may serve the additional purpose of an outlet, to undue impressions upon the lungs and windpipe, by an excess in the exercises of the voice and speech, and thereby defend those important parts of the body from rupture and disease.

I shall conclude this inquiry, into the functions of the spleen, liver, pancreas, and thyroid gland, by informing the reader, that I have yielded reluctantly to the solicitations of my pupils, and the advice of my medical friends, in offering it to the public in its present immature state. My best wishes are for an early examination, and a speedy refutation of the opinions contained in it, if they are erroneous; and if otherwise, that the inferences to which they lead, may be immediately applied to the practice of medicine.*

Philadelphia, May 13th, 1806.

To the Editors of the Medical and Physical Journal.

GENTLEMEN,

HAVING found considerable advantage from the use of the seton after operations on the eyes, especially after couching; I hope the recommendation of it to the Faculty in those cases, may not be deemed intruding upon the sheets of your valuable Journal.

If my experience in many instances had not clearly convinced

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* Since I have adopted, and taught the use I have assigned to the spleen, a former pupil of mine, copied from a French edition of one of Heister's works, by Dr. Senac, in the possession of a physician in a neighbouring state, and put into my hands a short note, in which the Doctor glances at the opinion I have delivered; but rejects it as chimerical. The peculiar ideas upon that subject, and all the others contained in the above inquiry, occurred to me, while I was employed in investigating the causes of the obstructions in the spleen and liver, which take place in madness.

convinced me of the propriety and benefit of the Seton, I should not have presumed to bring it forward, particularly as it was a very ancient plan of cure in many other disorders

The inflammations which take place after operations upon the eyes, are well known to produce, on some occasions, abscesses, suffusions, contractions of the iris, &c. &c. These do not invariably give way to local or general bleeding, or indeed to any other attempts. Loss of sight will sometimes succeed, in defiance of the means of the most skilful operators.

To prevent such accidents, or to relieve them when threatening, is the intention of the seton. The result of my experience speaks highly in its favour.

In all operations upon this organ, where there may be reason to apprehend subsequent injury, it has been my practice to introduce a seton in the neck, either at the time of the operation, or after a few days. The seton appears to me, for this intention, more effectual than any other endeavour which I have used.

In some cases it was not employed, until a certain degree of pain, of inflammation, of eccymosis, or of swelling in the eye-lids and membranes actually existed.

These complaints, in general, have given way more or less speedily to the use of the seton; and it has been a satisfactory and most excellent resource to me, upon many occasions.

Later experience has induced me to insert the silk on the very day of operation; and also to adopt it in other cases, to resist the attack of inflammation, &c. upon the eyes.

Surgeons of former times were more versed than we are, in the use of the seton: it is not therefore, the novelty of the practice which you will permit me to recommend, but the proper application.

It may be set on the back of the neck as usual; or if deemed more eligible, very near, or within the roots of the hair. And however objectionable the operation may prove to young persons, yet, in cases of need, it will, I hope, be found particularly useful.

Gentlemen, will you excuse a digression from the subject. I wish much to urge the expediency of inoculating for the vaccine, in parts less exposed than the arm.

Any surface of the skin, it is to be presumed, will answer. I have many years ago inoculated in the leg successfully

cessfully for the small-pox, and of late equally so, for the vaccine, just above the knee, on the inside of the thigh.

It will avoid disfiguring a part, which the fashion of dress, at present, requires to be exposed.

Experience may determine the best situation for its insertion. Possibly, such may be found, where the lymphatics take their course most clear of glands.

I do not apprehend, that any person has already advised the adoption of this mode of practice.

Is there any strong objection to it? Perhaps some gentlemen may think it worth the trial.

I am, &c.

JAMES ATKINSON.

York, July 8, 1806.

Dr. Kinglake, in Reply to Dr. Kentish, on the Treatment of Burns or Scalds.

To the Editors of the Medical and Physical Journal.

Gentlemen,

THE question lately agitated between Mr. Harrold, Dr. Kentish, and myself, relative to the comparative advantage of the cooling and heating mode of treating burns and scalds, is not likely to be soon set at rest by the positive manner in which Dr. Kentish would enforce his opinion. Your last Journal contains some comments of Dr. K. on the effects of the cooling treatment. In those, he feels no hesitation in admitting the apparent but delusive benefit of refrigerating applications, confidently ascribing the seeming advantage to the healing powers of nature. "Of this fact," says the Doctor, (alluding to the supposed virtue of cold water) "I shall not for a moment doubt; but what does it prove? Merely, that burns or scalds, at a certain extent, will get well in defiance of the application of cold water. It is not in these accidents alone I have known nature triumphant over every officious interference of art, which have retarded her progress in re-establishing the equilibrium of health." No fact, no truth, can pretend to cope with such a licence as Dr. K. has here assumed. However speciously appearances may indicate usefulness in a mode of remedy, yet no real benefit has been rendered!

ed! and why? because it would be repugnant to a given principle that theoretically denies the possibility of such an occurrence! This is surely arrogating too much; it divests much too sweepingly cold water, of the power of relieving inflammatory heat by its refrigerating influence, to transfer the capability of benefitting to a "principle," that exclusively prescribes additional excitement as the only rational mode of rendering service.

Can Dr. K. justly complain of having either his Essays or the practice they would inculcate, neglected, when he proposes the exclusive power of his remedy, in such unqualified terms of heavy censure, on that which both medical and popular experience has abundantly sanctioned?

How will Dr. K. feel at being told, that the very cases on which he rests the demonstrative proof of the superior, nay, the infallible efficacy of his remedy, have really amended under the restoring aid of nature, independantly of the "officious," the painful "interference of his art." Such latitudinarianism in resisting the evidence of facts, would furnish an equal objection to every medicinal effect that could be produced. If instead of untying the knot that may obstruct the solution of a difficulty in medical inquiry by rational explanation, it be thus abruptly cut, it may be justly feared, that an end would soon be put to all patient and correct investigation.

The inflammatory violence inflicted by fire will no doubt, in many instances, spontaneously recover; but if this be ultimately accomplished through the wearisome and painful processes of protracted inflammation, ulceration, and cicatrization, is no benefit rendered by an application that obviates these embarrassments and expedites the desired cure? This, cold water accomplishes in the most evident, commodious, and satisfactory manner. It will then be to no purpose for Dr. K. to expect that oil of turpentine is the true and only remedy for a burn or scald, that it owes its virtue to its stimulating influence, and that therefore, *é converso*, cold water by its sedative effect must be injurious.

Popular remedies are not often popular evils; the multitude may be thoughtless, but they are attentive to matters of fact, and will not be cajoled into a persuasion, that either the removal of pain is its aggravation, or that freedom from all danger of losing life is actually verging on death. The untutored can feel and express sensation with sufficient correctness, to dispute with the medical theorist on the subject of pain. It requires no erudition to judge

of the effect of a remedy, when the first step of its influence is to procure an alleviation of torture. This is the experience which mankind very generally can furnish in support of the efficacy of cold water in burns or scalds.

The case of Ann M'Quicker, recited by Dr. K. is of the description that often proves mortal in defiance of any aid that can be afforded. The extent and severity of the burn must have so tortured and convulsed the system as to have kept life as it were on the wing of departure. But what had induced all this exhaustion of vital power, this chilling tremor? Surely, the agonising pain consequent on the burn. Would it not then have been advisable to have reduced the inflammatory action, and to have alleviated the threatening pain by cooling applications, rather than to have exasperated it, by those which were heating? Why was laudanum given? Was it not with a view to diminish the concomitant irritation? But why question a fact? Dr. K. may fairly demand, can you refute it? No, it is not my wish so to do; but it would be easy to avail myself of Dr. K's casuistry, in objection to its validity, by asserting that it was one of those instances in which "nature is triumphant over the interference of art." The burn was, it must be confessed, deplorably severe; but on what ground can the eventual cure be held up as vastly transcending what could have been expected from any other mode of treatment? The accident occurred on the 11th of January, and the patient was not "discharged cured until the 11th of May!" A period sufficiently long to exclude the boasted advantages of the treatment from any extraordinary merit for rapidity of success, and quite long enough for "nature to have been triumphant over the interference of the art," whether "officious" or not, which was adopted.

Dr. K. remarks, that "had Dr. Coxe entertained the same ideas with Dr. Kinglake, I have little doubt but all vital action would have been extinguished in a short time, and it would then have ranked with the many cases we hear of, where the patient is dreadfully burnt, and dies in a few hours." Dr. K. is at liberty to entertain but little doubt respecting what would have been the event, if my ideas of appropriate treatment had been practically adopted; but his so doing, does not clear the question of all ambiguity. Less excitement would have perhaps advantageously economised the powers of life, and not have wasted them in the profuse manner that must have happened from the stimulating means which were employed.

Under

Under these circumstances, both less immediate danger and distant distress from slow and difficult healing might have been the happy consequence. But is this case deemed the *experimentum crucis* of the infallibility of the stimulating treatment? Could nothing worse, compatible with life, possibly occur for a trial of its curative powers? Is this the description of case which Dr. K. would pronounce to be necessarily mortal if treated by any other mode than that which he proposes? If so, he would do well to retract that declaration, as it is highly probable that the use of topical cold would rescue such cases from all danger, and that much more speedily, and less painfully, than could be effected by the heating method of treatment.

Dr. K. then says, that "the danger of suddenly checking an increased action may be observed in a variety of circumstances; the taking a draught of cold water when the body is heated, occasions sometimes the most dreadful effects, such as dimness of sight, staggering, difficult respiration, coldness of the extremities, imperceptible pulse, and, in the course of a few minutes, death." These effects are not correctly referable to diminishing increased action, but to the chilling influence which the swallowing of a cold fluid would have when in a state of perspiration. It would be nature's most salubrious cordial in circumstances of increased action *only*, unattended with the cooling process of profuse sweating. The dry and heated skin from febrile commotion, or from any other cause, inducing violent arterial action, is most beneficially removed by a draught of cold water; but a moist skin makes all the difference between the same agent proving a direct remedy and a deadly poison.

Dr. K's principle and practice shall receive from me all the investigation their importance deserves; and if they appear to be as well founded as Dr. K. conceives they are, I shall feel no difficulty in acceding to their high merit, and should esteem it unjust to attribute such glaring proofs of virtue as Dr. K. has thought proper to do with respect to the use of topical cold, to the exclusive efficiency of nature. Dr. K. may rely on the purity of my intention, and likewise on my disposition to prefer the greater good, if even it should be found to consist in the practice which disclaims the cooling treatment as "an officious interference of art;" though, in my present opinion, it is in all cases of burns or scalds, under certain restrictions, the most appropriate and effectual remedy that can be devised for such injuries. I am, &c.

Taunton, July 19, 1806. ROBERT KINGLAKE.

To the Editors of the Medical and Physical Journal.

GENTLEMEN,

BY publishing my crudities on the origin and specific action of *Vaccina*, in Numb. 2, of your first Vol. I had no expectation of being honoured with the notice of either party; still less, if possible, of furnishing the anti-vaccinists with an auxiliary argument. A spirited writer, however, on that side, Mr. Lipscomb, has incidentally introduced me; and your Reviewer of his publication has facetiously, and I will acknowledge justly enough, remarked on the obscurity and want of precision in certain of my ideas and expressions. But need I, with no higher pretensions than those of mere common sense, be ashamed of having written vaguely on a subject which has hitherto baffled the united talents and physiological researches of the most eminent medical men of our time?

I repeat, and with additional sensibility, my former protestations of the highest respect for the professional character and exalted public services of Dr. Jenner. I think no mortal before him ever had it in his power to bestow so grand and extensive a blessing upon the human race, as the Jennerian discovery will probably be. For, however wary and scrupulous on the subject of modern discoveries, I can, without hesitation, allow to Dr. Jenner the palm of original discovery, by long, accurate, and sedulous experimental exertions, of the reality of the vaccine preventive, which, before, was only an old wife's story, told in two or three obscure corners of the country, unknown and unthought of every where else. I also sincerely hope that this great and patriotic medical character will soon receive an additional remuneration, more adequate to his long continued labours, the immensity of the public benefits resulting from them, and more suitable to the high liberality of this country. Indeed, Dr. Jenner has a just claim on the gratitude of every country, and every government in the world.

But searchers after truth must not be dazzled with the lustre of great names, nor take for granted the infallibility of any man, or any system. And I do not feel disposed to attach any great consequence to the hypothesis, that we have originally derived our diseases from brute animals, or to make use of it as a ground for the notion, of the pox of the cow proceeding from the grease of the horse's heel.

Diseases

Diseases are doubtless intercommunicable between men and beast; most of the morbid seeds will thrive, perhaps, reciprocally in either soil, as will those of animal generation. Still nature may preserve a more regular course than appears to our limited powers of research.

I will freely own, that the point in dispute would be at once settled and determined for ever, could we depend on the accuracy of those accounts from the continent, where it seems they are in the constant habit of inoculating indifferently from equine or vaccine matter, and with similar successful results. But I am afraid our experience will by no means authorize us to encourage such dependence. We have received strange and incongruous accounts from abroad. The mange and scab in sheep have been confounded with the pox; and those animals have, we are informed, been vaccinated with the expectation of preventing the former. It has been pretty generally acknowledged, both on the continent and in this country, that the grease in horses is not understood; a very ill complement, surely, to so many scientific and practical veterinary writers, who have amply described that malady in the horse, so extremely common, and so extremely obvious in its nature, causes, and effects.

To proceed to the arguments in favour of the above hypothesis in England:—I apprehend it will obtain little additional credit, in consequence of the late intelligence communicated by the Doctors Jenner and Adams, from Mr. Tanner's farm, near Berkeley (Medical Journal, No. 88.) Those philosophers, laudably in search after facts, doubtless offered such as they obtained for the purpose of discussion, that such might thence have their just value, but not more allowed them. The proof in this case is merely presumptive. The boy might carry a sufficient quantity of the greasy matter for the purpose of infection, upon his hands, to the teats of the two cows, or he might not; having, according to laudable and cleanly usage, wiped the said matter clean from his fingers upon, and therewith vaccinated, or equinated, his coat sleeves, or his sheep-skin breeches. In the mean while the two cows first infected, might have received the infection from a different source, or have spontaneously produced the disease; and from those the infection might, or might not, have proceeded to the rest of the herd. It farther very well might not have been even so, since the herd might have taken the disease in succession, one after the other, and all from the same source, probably contagion of the

 atmosphere;

atmosphere; and perhaps the state of the air, from the long prevalence of N. E. winds might be a predisposing cause of the diseases. As to our actual experiments in this country, some experimenters have produced, from horse grease, *a disease similar to cow-pox.* Dr. Head (Lond. Med. Soc.) *thinks,* that, in one case, he had evidence that cow-pox was derived from the grease. But we have a number, on the other hand, who never could, after repeated fair trials, produce either pox or any other disease from the insertion of the *virus* of grease from the horse into the teats of the cow; among these Dr. Kinglake has published in your 88th No. several very satisfactory experiments. One of the arguments made use of in favour of this hypothesis, appears to me, if not fatal to it, yet demonstrative of its very uncertain nature. It has been often urged as a plea for want of success, that the proper species of grease has not been obtained. With respect to that general train of arguments which might be brought to bear powerfully against the presumed virtue in equine humours, they will suggest themselves readily to every one who has reflected on the subject; but, instead of arguments, I follow Dr. Kinglake, in calling for experimental facts, than which nothing can be more easily attainable, since the fluid of grease may be, *miserable dictu,* always found near the head quarters of *vaccina,* of all species and qualities, and in every possible stage. Surely, as the Dr. says, sufficient experiments of this kind might be instituted with the cow; and with all manner of safety, to my thorough conviction, with the human subject, provided the matter were taken from the grease in its acute or first stage; and if I understand the matter aright, we make use of the variolous, or vaccine humour in its mature, not in its putrid and acrid state; analogically, we therefore ought to do the same with the fluid of grease. But, *perhaps,* whilst I am disputing the point, the irrefragable evidence of facts has already sealed my refutal, to which I shall then bow with submission, without being in the smallest degree ashamed of the ground on which I now stand.

If we must account for cow-pox with more solicitude than we are accustomed to do for other diseases, for my own part, as to its *first* ætiology, I guess it was originally by nature bound up in the volume of the cows constitution. In the same light I view the greasy humour (to use the language of the stable) so peculiarly abundant in the body of the horse, and so apt to extravasate and overflow, in

in various circumstances and through diverse channels. The cow-pock appears to me, a mighty easy thing to say, to be the *variola* of that genus of animals. I think the same of the sheep and swine-pox. That there should not exist a precise analogy between these and the human disease of similar denomination, I apprehend to be of no material consequence to the argument. Nature has not thought proper to entrust us with all her secrets, and we may perhaps never arrive at the knowledge of the necessity, by which she was compelled to make *variola* a recurrent in brute, and a non-recurrent disease in human creatures; or why, considering that anomaly of rule, the one should supersede the other.

But proofs of the sufficiency, safety, mildness, and pleasantness of vaccination, as a preventive of the small-pox, have been, through a course of years, so multitudinous and universal over the whole civilized earth, that all theoretic discussions of the why and the wherefore may be safely suspended, and left to the gradual and fortuitous elucidation of time; whilst the immediate object ought to be, to catch at the proffered benefit of such ineffable consequences to the human race; and they must have miserable souls, truly, who, with the mountains of evidence before their eyes, of absolute security, on such easy terms, against a horrid and loathsome pest, are yet afraid to venture. Never before, was any discovery pursued with such rapid steps, and upon so grand and universal a scale. Nor is the noble enthusiasm of individuals and public bodies yet spent, or at all slackened, after all their great exertions; and our present patriotic administration, the decided and fatal enemies of that first and most crying of all human abominations, the Slave Trade, have given notice, that they are about to take *Vaccina*, the friend of human nature, under their especial protection. The object of Lord Henry Petty appears to be, to devise proper means for enlightening the minds, and counteracting the groundless prejudices of the people, on this subject, so important to their welfare; to the end, that as early as possible the advantages of vaccination may be rendered universal, and the plague of small-pox be totally stayed and finally extinguished.

I am uncertain whether it occurred to my own mind, or whether somewhere read of a plan, which seems to me to be one of the most feasible which can be conceived to spread universally the practice of cow pock inoculation. It is, *to commit the task of admonition to the hands of the ministers*

ters of all religions. When they baptize or name a child, they might at the same time, as a regular branch of their duty, set forth to the parents, in their most forcible and persuasive mode, the great advantages, public and private, and the strong necessity of infant inoculation. With this advice, a short printed account of the facts which demonstrate the success and safety of the cow-pox should be given gratis. Such printed accounts should be, from time to time, circulated throughout every parish, and most particularly amongst the lower classes, at the expence of government. Man is the creature of custom, good or bad. The inducing a habit is every thing; and could it once become as necessary, that is to say, as customary to vaccinate as to name a child, the small-pox would not now have existed. Indeed, the extinction of that foul and fatal disease has ever been in the power of the people themselves, since the discovery of inoculation by similar means; but it was formerly at a considerable risk of life, which by the vaccine discovery is reduced even to nothing.

Having suffered much myself from a waste of bodily strength, and otherwise, under the natural small-pox, against which disgust so penetrated my infant mind, that a lapse of full fifty years has not been able to eradicate the vestiges of it, I determined to inoculate my children at the breast; one of whom, a boy, had nearly perished under inoculated small-pox, but he survived to be buried, seventeen years afterwards, in the Indian Ocean. In May 1803, I caused to be vaccinated, at St. Pancras Hospital, my female infant, of the age of six months. She was then teething, with a rash upon her, and considerably affected by influenza. The inoculation did not succeed, which I attributed to a medicine taken from the hospital in too powerful a dose, the same quantity having occasioned super-purgation in a neighbour's child of a robust habit. After my child's recovery, I caused her to be again vaccinated, and she went through every stage of the disease regularly and most successfully, the pustules being very beautiful, and assuredly genuine. Accidently or not, her state of health mended with the progress of the cow-pox.

In the following July, the child had an eruption resembling the tooth rash, without itching or inflammation; afterwards a small pimply eruption, which itched violently. In the autumn, a pustulous eruption spread thickly over her lower extremities, appearing, I believe, no where above, excepting upon her mouth. Many persons who saw

saw it said, 'it was the cow-pox come again.' The pustules were distinct, having the areola around them, scabbing off regularly, and leaving a blue spot upon the skin. They strongly resembled pustules which I have seen on the teats of cows; and probably this is the eruption which the old women call 'the scurvy after the cow-pox.' The same humour recurred the following October, 1804; again, July, 1805; and a remaining pustule was visible on one foot in November. The quantity of eruption diminished every return, and has totally ceased this year. No external applications had any effect in counteracting or dispersing this eruption, any otherwise, than if repelled or dispersed in one part, it re-appeared in another. A few mild doses of calomel seemed to accelerate its dispersion. The child is of a delicate habit, but of a constitution perfectly sound and healthy; and her state of health, according to my usual custom, has been superintended from the hour of her birth with the utmost prophylactic care in my power to bestow. She was in perfect health and spirits previously, during the continuance and subsequently to the cessation of each eruption; and granting it to bear any possible relation to the cow-pox, of which I am an incompetent judge, I can estimate it as no objection, probably the reverse. This child has lately had the chicken-pock, but never the hooping-cough or measles; both which, a certain fancy I have long had in my head, leads me to suppose may be prevented.

I ought, however, to observe, that when the eruption in question first appeared on the infant, my other children caught from the children of a chairwomen, accidentally employed, a humour which, I found on enquiry, was supposed to have been brought into the woman's family by some nurse-children. According to the woman's account, this eruption first appeared in "*broad, white, bladdery bumps.*" When I examined these children, their fingers were distended with pustules; their hands, sides, and hams covered with them; and the disease appeared to me to wear the direct psoric character, and to be inveterate pustulous itch. The pustules, on their decline, left indurations on the hands, which were to be felt many months afterwards. One of these children had suffered severely, the previous year, from the inoculated small-pox, of which she now bears the evident marks. This eruptive disease, however, was said to be almost epidemic in the neighbourhood during the following autumn, many distinct and unconnected families being similarly affected by it; and it

was

was declared by several of the apothecaries attending, not to be the itch, but an eruptive affection connected with the peculiar state of the atmosphere. The most powerful unguents and lotions which I could employ, amongst the former, that recommended by Mr. Ring, had no certain or visible effects; the case was similar with internal remedies; whence I was induced intirely to desist, and, in a few months, the eruption disappeared spontaneously, and most probably from a change of temperature in the weather. The character and appearance of the eruption upon the infant still seemed distinct from that of the other children; there might yet be an affinity between the two, which I did not possess the skill to discover, and I omitted to state, that about two months previously to the inoculation of the infant, there appeared on the soles of her feet, arms, and thighs, a thinly scattered eruption of firm, dry pustules, which soon died away, without any perceptible consequences.

The opposition to the cow-pock inoculation was quite in the course of human affairs, and ought not to have given the least surprize or, indeed, regret to the experienced. There must ever exist various motives for opposing new improvements. We have a sect of alarmists, who, notwithstanding so immense a portion of the habitable globe remains yet unpeopled and uncultivated, exist yet under the direful apprehension of perishing at last with famine, from the present rapid increase of population, which they loudly call upon legislators to check; not indeed absolutely by converting the surplus into Abelards, but by a not altogether dissimilar process. Others there are, who dread a decrease of the consoling resources of pestilence and war, and are even jealous of the diminution of vice, crime and misery, lest human profit should diminish in proportion. Such sentiments are no secrets. But I have ever conceived, that the opposition publicly and fairly made to vaccination has rendered the highest degree of service to the practice, by placing it upon its proper and legitimate basis of truth, far earlier than could otherwise have happened; and have always regretted that the respectable Mr. Goldson was treated with such an undeserved harshness. Right of opinion, in all possible cases, is universally reciprocal, and naturally inherent. It is a precious property, which, instead of being taken from a man by the law, by the public, or by individuals, ought to be the first thing unconditionally secured to him. And what right to his opinion concerning *vaccina* had any man which

which Mr. Goldson did not also possess? As to the bull-faced, chimerical, and bloody-boned opposition, every man who runs may read the intent and drift of it. We are by no means bound to suppose the authors themselves believed all they published as truths, since we know of old that truths are of two sorts, the actual and the virtual. One of the sages of this class, about two years since, farther obliged the lovers of the ridiculous and the wonderful, by publishing a most ostentatious account, how a serpent jumped down his dog's throat! and how, for humanity's sake, he kept the miserable and tortured animal alive during four and twenty hours. The system of terror, however, had its desired effect upon many of those to whom it was addressed, namely, the ignorant and vulgar; and the consequence was a temporary spread of the contagion of the small-pox, by which some hundreds were relieved from all farther anxiety about the respective merits of the two modes of inoculation; and this last struggle of opposition has effectually served the cause it was intended to injure. Men are seldom informed or reformed, without the chastisement of suffering; and in this case, the living will profit by the example of the dead.

I must beg leave, in few words, to notice an inaccuracy in my former communication, (Vol. I.) where I identified the *heavings* with the pox in swine. The heaving, indeed, is frequently a symptom of that disease, but it is a general term for an inflammation of the lungs. With sincere acknowledgments for the instruction and entertainment I am constantly reaping from your valuable Journal.

I am, &c.

J. LAURENCE.

An experimental Inquiry into the Nature of Gravelly and Calculous Concretions in the Human Subject; and the Effects of Alkaline and Acid Substances on them, in and out of the Body. By THOMAS EGAN, *M. D. M.R.I.A.*

[Continued from our last, pp. 153—165.]

THESE facts being pretty well established and acknowledged, it is time to enquire how far we may account for them: and whether experiments, instituted out of the body, may not throw some light on this subject. Dr. Saunders, in a letter to Dr. Percival, (Percival's Essays, Medical

cal and Experimental, vol. iii.) on the subject of carbonic acid as a solvent of calculous concretions, observes, "If a more powerful and active solvent than any hitherto known shall be discovered, it is highly probable that such a discovery can only be made by a rational and chemical inquiry into the powers of different bodies of combining with the contents of the urine, and preserving them in a fluid state out of the body." Now, on the other hand, we may presume, that whatever substances cause a separation or precipitation of uric acid, in an aggregate state, from healthy urine, will give rise to these disorders. For we are not to forget that the uric acid, which forms so large a proportion of calculous concretions, and the entire of the gravelly, is a natural secretion from the blood, performed by the functions of the kidneys, and excreted by the urine, and can only be prejudicial by a previous morbid separation from it within the body. With this necessary view of the subject before us, (for which we are, as already observed, indebted to Boerhaave,) I resolved to try, 1st. What might be the effects of acids of different kinds on healthy urine, as to their influence in causing this same previous precipitation; and, 2dly, that of alkaline substances in preventing it. And here it must be observed, that to draw any satisfactory conclusions from experiments made with these substances out of the body, we must suppose they reach the kidneys and blend with the urine, still possessing their relative distinctive properties; and that this takes place, we have every reason to presume. Drs. Percival and Saunders, Mr. Bewley, and many others, have ascertained the presence of carbonic acid, in an uncombined state, in the urine of those who drank the mephitic water for some days: an acid certainly foreign to its recent healthy state; for, after repeated trials, by heating it to nearly ebullition in one of Priestly's air bottles, I never could procure the separation or transition of a single bubble of carbonic acid into a jar of lime water. And if this weak acid reaches the kidneys undecomposed or uncombined, we shall have less difficulty in believing the more powerful ones may do so. That the tartarous acid in the combination of the acidulous tartarite of potash exerts powerful effects on the functions of the kidneys, is well known; and that the urine is at the same time rendered more acid, I have repeatedly ascertained by the usual tests.

We may say the same of the other vegetable acids, which manifest also diuretic powers, and increase the natural acidity of the urine. Linnæus, in his second volume of the

the *Amœnitates Academicæ, De Genesi Calculi*, already quoted, mentions his having made the following experiments to this purpose. He says: "Hisce diebus ipse experimentum institui cum urina; hæc communiter a solutione lacmus parum admodum rufescit; at si libram unam vel alteram vini Rhenani, vel alterius vini acidi hauserim, post horam unam vel plures, valde rubra et rutilans evadit urina, ab affusa solutione lacmus; certo indicio, acidum vini totum corpus permeasse, et urinam infecisse." Nor should we wonder that these energetic substances should pass unaltered to the kidneys, when we find so many mild vegetable matters do so. I will not mention the communication of so volatile a principle as odour, but will more particularly dwell on that of colour. Rhubarb, turmeric, madder, and many other substances, so completely impart their colour to urine, that they would appear to be very little altered. Nay, the juice of the beta vulgaris, a mild esculent of the pentandrous class, so deeply reddens it as to cause it to be mistaken for bloody urine, of which a late instance has occurred in my practice.

As to alkaline substances, it has been at all times known that they communicate their properties to this excrementitious liquor. A perseverance in the use of the *aqua kali puri* of the shops for a few days, even in small doses, converts its acescent into the alkaline state; and we have every reason to suppose that the same takes place with the carbonates, which are taken in so much larger quantities. This seems confirmed by experiments made in London and Paris; and the alkalescent impregnation of the urine was ascertained by the formation and precipitation of the acidulous tartarite of potash upon the addition of the tartarous acid. Yet, from a good deal of experience in these matters, I may aver, that as to the carbonates the dose must be considerable, (which was the case in London,) and continued for some time, having frequently given two scruples of desiccated soda (containing, according to Kirwan, 23-94 grains,) in the twenty-four hours, for some days together, without any diminution of the usual acidity of this liquor.

For the information of such of my readers as may not be of the medical profession, I must here observe, that physicians distinguish two kinds of urine: the one rendered immediately after meals, and much diluted, before the process of digestion, or state of sleep, can take place; always more or less limpid; being comparatively less charged with the natural component parts of urine, (the urée, or extractive

extractive colouring matter, in particular,) and called *urina potus*, to distinguish it from the *urina sanguinis*; rendered many hours after meals and sleep, the taking no more than a necessary quantity of liquids, and containing the usual proportion of saline and other ingredients; more especially the urée, to which it owes its natural citrine colour.

This last, therefore, was that employed in the following experiments, if not otherwise specified; with the chemical history of which I must suppose gentlemen of the profession now tolerably well acquainted, being so fully and accurately detailed in the tenth volume of the *Connoissances Chimiques.*

Having, in the preceding pages, insisted so much on the acid and acescent drinks as occasional causes of these complaints, the first object seemed to be, to ascertain whether the urine of those most subject to them, or actually labouring under them, was more relatively acid. We have already seen, from a register of these patients, kept for forty years in the hospital of Luneville, that the early of life, from two to six years of age inclusive, is most liable to calculous affections. Now, the urine of healthy children is always found more acid than that of adults, generally in the proportion of two to one. Whilst several drops of the latter are requisite to redden a given quantity of infusion of litmus, a single drop of the former turns it to a clear red. Paper stained with an infusion of turmeric, and reddened by an alkali, was immediately restored to its colour by a single emersion in the urine of children; an effect which required some time in that of adults. And that this should be the case we shall not be so much surprised at, when we consider the nature of their diet; and that, in addition to the phosphoric and uric, their urine contains the benzoic acid in considerable quantity, the proportion of which is found afterwards progressively to diminish with their advancement in life.

The constant opportunity I have of attending to those subjects, enables me to say, that the urine of gravelly patients, when fresh rendered, nay, after standing many hours, in a temperature of sixty degrees, is relatively more acid than the healthy, sometimes as much so as the gouty; and frequently continues so, even after depositing its gravelly matter. An exception to this, however, sometimes occurs in gouty habits; their urine depositing copiously this acid substance, and yet manifesting no increase, but sometimes rather decreased, acescency; for with them a considerable

considerable diminution of the quantity of the usually excreted superacidulated phosphoric salt often takes place, as shall be fully explained upon another occasion.

Having premised these observations, it is now time to consider what effects acid substances are productive of, when mixed, out of the body, with this very complicated liquor. And here, to prevent repetition, I will observe, that that generally used was rendered fresh in the morning, in the quantity from three to four ounces, (unless otherwise specified,) being that most easily retained at one time in the bladder. The quantity of acid extremely small, for obvious reasons, and seldom increasing its acescent properties (as ascertained by the usual tests) beyond what frequently occurs in the urine of those who use acescent drinks, or are afflicted with gout or gravel. A standard quantity was always laid by for comparison; and the temperature from sixty to seventy-five degrees, being in autumn 1799. And to begin with the vegetable acids.

Exp. 1.—To four ounces of the urine of an adult was added one drachm of common acetous acid, which, like every other acid, caused no immediate change in it; but in a very short time, and before it cooled down to the temperature of the atmosphere, some extremely minute shining spiculæ, observable only by a lens, were seen floating in it: these gradually increased in number and size, began to reflect the light, and, from being perfectly transparent, soon became coloured, to settle upon the usual cloud, or *nubecula*; which now began to form, adhere to the sides of the glass, and partly fall to the bottom in the shape of small bright red crystals. In the standard, after twelve hours, nothing more observable than the usual *nubecula*; nor was there any sign of crystallization, or separation of uric acid, even after twenty-four.

Exp. 2.—To the same quantity of adult urine were added one drachm and a half of acetous acid, which caused a more copious separation and crystallization of this substance with the foregoing appearances. None observable in the standard after twenty-four hours.

Exp. 3.—To four ounces of urine of a healthy child, who never was observed to pass gravel, and of the usual degree of acidity, was added one drachm of acetous acid, which soon caused an evident and copious separation of crystallized uric acid. The crystals were, however, not quite so coloured; the urine of children not being so much impregnated with the urée, or colouring matter. No such appearance in the standard after twelve hours or more.

Exp. 4.—To four ounces of adult urine, rendered very soon after a tea breakfast, and nearly in a state of *urina potus*, was added one drachm of acetous acid. After three hours, a crystallization of minute sandy particles took place. None in the standard even after three days.

Exp. 5.—Thirty drops only, of acetous acid, were added to four ounces of the urine of a gouty patient, æt. 60, and who sometimes felt some slight gravelly tendency. A very copious precipitation of this matter quickly took place. Some observable in the standard, also, the next day.

Exp. 6.—To three ounces of healthy adult urine were added a few drops only of citric acid. A distinct crystallization, but extremely minute, took place. No appearance of any in the standard after many hours. The experiment was repeated with one drachm of filtered citric acid, which only hastened the separation and increased the quantity of crystalline matter.

Finding, by these experiments, and numberless others, with a detail of which it would be unnecessary to take up the time of the academy, that the acetous and citric acids, blended with the urine, separated its uric acid in a crystallized state, I thought it might be interesting to investigate what the effect of the tartarous acid might be, being that which, in an uncombined and partly combined state of acidule, as in the acidulous tartarite of potash, chiefly prevails in the wines and beverage of those countries most subject to these complaints.

Exp. 7.—To four ounces of healthy adult urine were added some drops only of pure tartarous acid. To the same quantity one drachm of acetous acid, which brought them nearly to the same standard of acidity; a circumstance always attended to in the comparative trials with different acids. In that with the tartarous acid the crystals were not only larger and darker coloured, but exceeded in quantity any thing before observed. In that with the acetous acid, a much smaller proportion of minute crystals took place.

Exp. 8.—To four ounces of urine were added two drachms of a filtered solution of acidulous tartarite of potash of the temperature 55 degrees. The usual separation and crystallization took place in large proportion: the crystals, however, much smaller, and less coloured, than those with the uncombined tartarous acid. The two last experiments, frequently repeated, presented the same results.

Exp. 9.—The result of the above experiments having led to some doubt as to the good effects of the carbonic acid

acid gas, so much, at one time, recommended by Doctors Percival and Saunders, previous to its more modern alkaline combination in our mephitic as well as super-aërated soda waters:

Into the middle part of Nooth's apparatus were introduced four pounds of fresh rendered healthy urine, and exposed to a stream of carbonic acid gas. After a few hours a copious and beautiful precipitation of uric crystals took place, (notwithstanding the constant agitation from the transmission of the gaseous bubbles,) larger than any I before observed, that from the tartarous acid excepted. In a standard quantity, no distinct crystallization, even after two days. A repetition of the same experiment afforded similar results.

Exp. 10.—Finding the carbonic acid gas productive of similar effects with the other acids hitherto examined, it was natural to inquire how far its combination with the portion of alkaline matter contained in our mephitic and soda waters, so highly surcharged with it, may prevent a separation of this uric acid.

Half an ounce only of the common soda water of the shops, prepared by Mr. Kinsley, was added to four ounces of healthy urine. A similar quantity was impregnated with carbonic acid gas. In the former, after forty-eight hours, or more, no more than the usual nubecula; nor could a single crystal be discovered even by a magnifier. In the latter, an early, copious, and beautiful crystallization. On the result of this experiment, frequently repeated, with various proportions of the mephitic alkaline water, I shall afterwards have occasion to make some remarks.

Though the mineral acids, in an uncombined state, enter not into the matter of our diet, and are no longer considered as lithontriptics, since the notion of the earthy nature of these concretions has been abandoned; yet, as they are sometimes prescribed with other indications, I thought fit to extend my researches, though in a summary way, to them also.

Exp. 11.—To sixteen ounces of urine were added eight drops of very dilute sulphuric acid. To a similar quantity, two scruples of citric acid, to bring them to nearly the same standard of acidity. After a very short interval, in that with citric acid, the usual appearances of transparent floating moleculæ reflecting light, and gradually becoming larger, were observed, and began to adhere to the glass; whilst in the other, after five hours, no such appearances took place. Yet, after forty-eight, here also a

 precipitation

precipitation took place of smaller crystals, and less in quantity; for, being collected on a filter, and carefully dried, they weighed only two grains, whilst the former amounted to three. And this is nearly the largest proportion I ever found the above quantity of healthy urine to contain.

Exp. 12.—As the nitrous acid is one of the most active solvents of this matter out of the body, I was curious to ascertain, whether, in the very dilute state in which it must reach the kidneys and bladder, (where its action must have been facilitated by the actual state of solution of this substance,) it would manifest its powers in preventing its separation.

To three ounces of urine, rendered a few hours after breakfast, and, of course, scarcely acid, were added five drops of weak nitrous acid, which did not seem to add very materially to its acescent properties.

To a similar quantity were added four scruples of acetous acid. In less than an hour the former deposited a distinct quantity of gravelly matter in considerable proportion. This, perhaps, we should not be surprised at, when we consider how the action of this acid in that fluid may be determined by superior affinity. In the latter the separation did not take place for a considerable time after. We see, then, that the nitrous acid speedily and powerfully precipitates this acid substance.

Exp. 13.—To six ounces of urine, shewing a strong acescent quality, were added only three drops of strong marine acid. A cloudiness and transparent granular precipitation took place, followed by the formation of extremely minute gravelly concretions, which, even after two days standing, did not assume so red a tinge as that with vegetable acids. This may probably depend upon some action of this acid upon the ureé, or colouring matter; but as to the smallness of the crystals, that evidently depends upon the more speedy precipitation, throwing them down before they can assume their natural size, and leaving but a shade of difference between the crystalline and pulverulent deposits.

Exp. 14.—From the above, then, we are satisfied that the vegetable and mineral acids cause a premature separation and crystallization of the lithic contents of recent healthy urine; but it may be observed that this only takes place under circumstances not at all applicable to the living system, viz. a much inferior temperature, and, in some instances, a contact with the atmospheric air; two powerful

powerful promoting causes of crystallization in general, but more especially of the less soluble salts. To determine therefore, this most essential point:

To six ounces of cold but recent urine (in a well-closed phial) were added five drops of very dilute nitrous acid, which were placed on a sand-bath; temperature, varying from 80 to about 100 degrees at most. The same quantity, with similar precautions, but without addition, was laid aside in the laboratory as a standard; temperature 56 degrees. After a very short interval indeed, and almost as soon as the urine acquired the temperature of between 80 and 90 degrees, small shining granular particles were observable with a magnifier, began gradually to settle upon a broken kind of nubecula or rather nubeculæ, and to acquire colour and size, though carried up and down the liquor, which was in constant agitation. This experiment again twice latterly repeated, and always with the same result, care being taken to keep the temperature, as nearly as possible, for a few hours, between 90 and 100 degrees,) afforded one of the most pleasing objects imaginable, viz. the formation of this crystalline matter, under all the disadvantages of elevated temperature and constant agitation, from (I may almost say) their primordial moleculæ to the accomplishment of their full size. And here, indeed, they are most beautiful, and not to be distinguished from those spontaneously deposited.

(To be continued.)

Observations on Digitalis, with Cases of Consumption and Hydrothorax. By Dr. Hamilton.

To the Editors of the Medical and Physical Journal.

Gentlemen,

THE pages of your Journal have ceased to exhibit the high wrought encomiums on digitalis, which a few years ago so amply contributed to swell the hopes of your readers, and of their consumptive patients; and I fear the efficacious use of this plant has nearly, in an equal degree, been banished from practice. Were such the fate of medical theories alone, there would perhaps be little room for regret. But it is much to be lamented, that many *medi-*

cal facts stand in the like predicament, and that remedies recommended as infallible, in relieving and curing the most obstinate and dangerous disorders, even by the first authorities, are frequently, when experience has decided upon their merits, consigned to oblivion. Such has, in a great degree, been the fate of the digitalis; nor is there any medicine concerning which, the opinion of physicians has more fluctuated. To the high expectations raised of it, by the respectability, and confidence in its powers, of the Gentlemen who brought it into notice, as a remedy for consumption, no doubt, much of its present neglect is owing; for in many such cases, it was found entirely to fail, even when exhibited in the most skilful and persevering manner; and it was consequently condemned, as inadequate to the cure of any, because it had been asserted of it, that it was able to effect the cure of all. But this remedy has not been unmeritedly neglected on this account alone; the manner in which it is usually collected, prepared, and exhibited, having, in at least an equal degree, contributed to its disuse. Had Dr. Drake's excellent observations on these particulars been duly regarded, it would, long ere this, have been found capable in many cases of producing the most salutary effects, and its efficacious but guarded exhibition would have become general. In many of the cases in which I found the best effects from this medicine, I have been told, it had been fully tried. These trials have usually been confined to the exhibition of two spoonsful, of a half pint mixture, containing 20 or at most 30 drops of the tincture, or a grain of the powder, night and morning; both preparations commonly obtained from a London druggist. In Mr. Tilney's case of Hydrothorax, related below, half a grain of the powder was ordered by a very eminent physician, night and morning; and when I proposed it, in another case, to which I thought its use eminently adapted, to a physician, high in the medical department of the army, he informed me, he had twice been prevailed upon to sanction the exhibition of digitalis, but that nothing should ever induce him to prescribe it again. Thus has this powerful and excellent remedy been trifled with, and neglected.

Before proceeding to relate the experience I have had, of the use of foxglove in consumption, and hydrothorax, it may be proper to state in a few words the manner of preparing it, as this will shew that it may be procured with very little trouble, and in any situation.

I cultivate the plant in my garden, where by common attention,

attention, it flourishes exceedingly, and I find that it grows with equal luxuriance in the grounds of several of my friends, although the situation and soil may considerably differ; nor have I perceived any deficiency, in the quality of the leaves procured from these different situations. My largest collection, however, has for some years been made, in the shrubberies of Lord Rous, at Henham, which enjoy an elevated situation, a few miles removed from the sea, and a gravelly soil. I collect the largest leaves from the most vigorous and healthy plants, when in full flower, and dry them in the shade. When this is effected, I rub them into coarse powder, taking out the large stems, and preserve them in well stopped bottles. The powder thus prepared is of a fine green colour, and has a fragrant smell, not unlike new made hay, but stronger.

Since Dr. Drake directed the attention of the Faculty to the employment of this remedy in consumption, by which he has conferred upon the healing art a great benefit, I have used it in very many of the cases that have fallen under my care. In the early stages of that disorder, I think I cannot be mistaken in supposing, that I have often seen it suspend, and sometimes avert, its commonly fatal termination. And in more advanced cases, where such advantages could not be hoped for, it has almost invariably succeeded in alleviating the most distressing symptoms, when by its gradual increase, a *reduction of the velocity of the pulse could be effected.* Speaking of this effect of digitalis, Dr. Ferriar says, "If any man had expressed an opinion a few years ago, that we should discover a medicine capable of reducing the pulse, without danger, from 120 in a minute to 75 or 80, at the will of the practitioner, he would have been ridiculed as a visionary. Such, however, under proper management, is the power of digitalis." Dr. Currie also observes, "this medicine may almost be said to be possessed of a charm for allaying inordinate action of the heart and arteries." Were this effect of the foxglove as constantly to be obtained from its exhibition, as these eminent physicians, and others, have supposed, I can have no doubt that it would prove, in the early stages of a disease, the danger of which may for the most part be measured by the rapidity of the pulse, as efficacious as its most sanguine admirers have hoped. But I apprehend the reduction of the circulation is very far from a constant effect of the most guarded use of this remedy. In much the larger number of the patients, to whom I have given it, in consumption, in saturated tincture,

ture, and in the most gradually increased doses, I have been compelled to abandon its use, before the circulation was reduced, from its generally debilitating effects, from nausea and sickness, or affections of the head, by which its farther use was prohibited. This disappointment I think I have observed to hold a pretty equal pace with the tendency to inflammatory action that was present. When there has been great heat, flushing of the cheeks, thirst, acute pain in the side, and the symptoms from which active inflammation is concluded to be present,—till these symptoms were removed, I have generally failed in reducing the pulse. In pneumonia also, and in other diseases of active inflammation, I have never seen good effects from digitalis, till this disposition was lessened by the use of the lancet, &c ; and until the expectoration had become copious, then, as well as in vomica, it has appeared very beneficial. I regret the necessity these observations lay me under, of differing in opinion from such a man as Dr. Currie, who says, "under the precautions pointed out by Dr. Withering, without the strictest attention to which no practitioner should prescribe this singular and powerful medicine, I have employed the digitalis to a very considerable extent, in inflammations of the brain, of the heart, and of the lungs; and have succeeded with it in situations where I should otherwise have despaired. I have also found it an excellent remedy in inflammatory rheumatism."

The Doctor however observes, "Digitalis does not, indeed, supersede the use of the lancet in these diseases, but it diminishes the extent to which it is required; and it may be used with safety and success, in cases where the lancet can no longer be employed." I have, however, stated only what I have repeatedly seen, and what many of my medical friends have witnessed.

When it has been apprehended from the presence of the symptoms above mentioned, that the digitalis would not produce the desired effect of lessening the frequency of the pulse, I have put the patient on a diet of milk and vegetables, prescribed saline and aperient medicines, and even have had recourse to moderate bleeding, before the tincture was given; and it has, after these precautions, produced every effect I expected from it. The following case will illustrate some of the preceding remarks, and I think fully establish the power of the foxglove over a strong disposition, at least, to phthisis; many others, shewing a greater or less degree of the same power, might be given, but as I chiefly wish to solicit the attention of your readers

to

to the efficacy of digitalis over hydrothorax, I shall content myself with this.

A. B. a female of delicate habit of the consumptive age, was in the beginning of August, 1805, affected with pain in the region of the heart; rigors, alternating with heat, slight cough, with difficulty and oppression of breathing, and quickened circulation. She continued under these symptoms some days, and when I saw her, the pulse was increased to 120. I directed her to lose a small quantity of blood, and to apply a blister to the side; she omitted the use of wine and meat, and lived chiefly on vegetables and fruit. By this plan, in a few days, she was in some measure relieved, but the pulse continuing as rapid as ever, she began the use of the tincture of digitalis, in a saline draught, in doses of ten drops every eighth hour, and it was increased one drop in each dose, daily, till she had taken seventeen drops at a time. The pulse was now 85, and without any farther increase of the dose, it was in a fortnight, from its first exhibition, reduced to 65. At this rate it was kept for the space of a month longer, by the occasional use of the medicine, with the decided amendment of all the symptoms; and it was hoped that no further anxiety need be entertained respecting the event of the case. About the middle of September, however, I was desired to visit this patient again, and I found her labouring under very nearly the same symptoms as at first, but the pain in the chest and difficulty of breathing were less urgent, and no evacuation was now judged necessary; the digitalis was prescribed as before, and acted in the same *kindly* manner; the pulse was reduced, and every symptom was again alleviated. In October, the complaint appeared again to make fresh progress, and it was deemed necessary that the patient should go to London for the benefit of additional advice, and with the intention of proceeding to a warmer situation, should that be recommended. A few days after her arrival there, I met Dr. Baillie in consultation. This gentleman judiciously observed, that the medicine to which she owed so much, possessed not, nevertheless, the power of preventing the return of her disorder, as had been already proved. And he advised the uva ursi, as recommended by Dr. Bourne, a remedy from which, in much larger doses than given by him, I think I have in hectic cases, seen considerable advantage. Here, however, it was not productive of benefit, and in a few days Dr. Baillie advised her to recur to the digitalis again; and its use was a third time attended by the

the same happy effects as before. Since that period, she has been obliged to have recourse to the tincture every eight or ten weeks, and has now been placed seven times completely under its influence; and it has never failed to relieve her from the urgency of the symptoms that first required its use. For many weeks past, it has not been taken, as the pulse has never amounted to more than 80, and no symptom of the former complaint has appeared; flesh and strength also are acquired, and there seems no well grounded fear that the former appearances of disease will return. The progress of the case, however, will be carefully watched, and the digitalis, should it be necessary, again resorted to.

Of the nature of this case, and its tendency to consumption, I presume no doubt will be entertained. Its apparent danger is proved by the following extract of a letter from Dr. Baillie, (whose accurate judgment is doubted by none) dated January, 1806.

"I have seen our patient this day, after an interval of six weeks; she does not seem to have lost flesh or strength, yet the disease has made evident progress, as some expectoration has been observed, and I can now have no doubt of its fatal termination."

Nor can there, I think, be any hesitation in ascribing the recovery to the Fox-glove. Of any person inclined to deny the beneficial influence of this remedy, in this instance, I would beg to ask, what would have been the effect of allowing the pulse to continue at 120 for even one month? In the foregoing remarks upon the influence of the digitalis upon consumption, I have stated what I have seen, and what I think will be found by others, who exhibit it with attention to Dr. Drake's directions, and without prejudice. In a great majority of instances, I fear it will be found to fail entirely, or to produce only temporary benefit; in some it will, undoubtedly, in the early stages, suspend the progress of the disease, and avert its fatal termination, and in several it will afford relief, to be obtained from no other source. In hydrothorax, a disorder generally supposed equally fatal, its curative powers are much more certain; and where organic affections are not present, or the frame is not entirely worn out by age and long protraction of disease, it seems to me but a short way removed from the nature of a specific, intending to express by that term, a remedy that is generally successful.

(To be concluded in our next.)

Halesworth, July 14, 1806.

Case of Plica Polonica, by M. Defour, *Physician to the Imperial Hospital of Quinze-Vingts, at Paris.*

In this disease the hairs of the head are so twisted and interlaced with each other, that they cannot be separated without tearing or breaking them asunder, in which case they pour out a bloody fluid. The plica polonica is almost unknown in France, but is so extremely prevalent in Poland, as to have obtained the above appellation. The Jews residing in that country are particularly subject to it. Among the causes principally operating to produce this cutaneous affection, is reckoned the slovenly and dirty manner in which these people live; they seldom comb their hair; they live in low and moist situations, and indulge to excess in the use of spirituous liquors. Another cause believed to be productive of this malady is the use of certain waters, which, whether employed in the way of drink, or under the form of baths, never fail to produce disagreeable consequences. To these causes must be superadded, an hereditary taint transmitted from father to son, and which consists in the too great relaxation of the pores and bulbs of the hairs, which are situated beneath the skin of the cranium. Thus it happens that a gross juice or matter, generated by the use of coarse or indigestible aliments, and of impure water, is propelled, by means of the heat excited in consequence of the abuse of spirituous liquors, into the cavities of the hairs, oozes through their pores, and occasions this malady.

During the month of December, 1801, I was desired to visit Mad. C—, residing in Vendome-street, who laboured under this malady. This lady was of a sanguine temperament, and of an irritable disposition. During her youth, she had suffered much from violent affections of the mind, and had been much addicted to the use of spirituous liquors. I saw her a few days after the disease manifested itself, and found her labouring under an acute inflammatory fever; her eyes appeared extremely red, remained half shut, and could scarcely tolerate the faintest light. On the fifteenth day from the commencement of the disease, I observed that the hairs stood erect, and were so intertwined, and glued together, that a night cap could not be kept on her head; and when the matted hairs were either cut, or broken, they poured out blood, especially during the paroxysms, or exacerbations of the fever, because,

cause, at these periods, the patient was much more agitated, and more frequently moved her head.

During the first and second stages of the disease, I prescribed cooling, diluting, and demulcent medicines; and, in the third stadium, bitters combined with acids, and occasionally gentle aperients were administered. At the same time, I employed externally, as a lotion, a decoction of comfrey roots, the leaves of brank-ursine, marsh-mallows, groundsel, and other emollients, with a view to favour the expulsion of the morbific matter by the hair, which appeared to be the outlet pointed out by Nature, as well as to prevent the reabsorption of the acrimonious and putrid humour into the system, and thus prevent its repulsion upon any of the internal viscera.

After a space of three months, during which period much blood and pus were discharged, the complaint at last yielded without cutting out the hair, a practice resorted to in Poland; and on the eighty-third day of the disease, to the astonishment of her friends, and physician, the hairy scalp entirely separated, and was found lying loose within her night-cap.

The patient long preserved this integument of the cranium, which was extremely curious, not only on account of the size, or dilatation of the hairs, but from their matted form.

Since her recovery, a new crop of hair has made its appearance, and at the present period, 1806, is nearly as luxuriant as formerly.

To the Editors of the Medical and Physical Journal.

Gentlemen,

After an absence of more than six years, the Typhus Fever has again made its appearance in this neighbourhood. The disease was no sooner recognized, than I betook myself with earnestness to the volumes of Dr. Currie. I rely implicitly on every fact therein advanced, I follow him, in so far as respects the treatment of this disease, I follow him in every step, and have hitherto had no reason to repent me of my guide; than whom, perhaps, the history of medicine does not furnish a character, more enlightened, more respectable, or more lamented in his death. I have

I have at present seen fifteen cases of this disease, all of which are now recovered, or recovering; and cold water, in one way or other, was applied to the surface of all. In one case indeed, exclusive of these, the complaint was immediately arrested in its progress by the affusion of cold water. Two brothers were already down; a third, had alternate chills and heat, head-ache, and disturbed sleep. It was late in the evening when I saw him; he had a burning skin, and pulse 110. I had him taken out of bed, placed in a tub, and poured two buckets full of cold water over him. When I called the next morning he had left his bed, and was walked out of the house; in the evening again, at his own suggestion, the same remedy was renewed; when I next saw him he appeared to be perfectly recovered, and from that time ailed not.

The affusion was employed in three other cases, with the evident effect of cutting short the disease; it was begun with about the third day, and by the seventh, the sufferers were convalescent. It was practised also on a fifth patient, where it did not so directly succeed; but that he went through the disease quicker, and, comparatively, with much less suffering, I have no doubt. The remedy was not used until about the sixth day of the fever, by which time, we may presume, the morbid actions and associations were too firmly established to yield so immediately as in the other cases. When I first saw him there was every appearance of a dangerous disease; he had a violent head-ach, great debility, was low in bed, with muttering, and startings of the tendons; tongue and fauces so dry as to prevent him almost from articulating; pulse 120, heat 104. The affusion was used night and morning only, being as often as I could see him; I repeatedly sat down by him for ten minutes after the water had been thrown over him, and always found his pulse about 90, heat 94; and he was still and composed for some time after. We went on in this way for five days, when he began to perspire violently, and lost his superabundant heat during that process; when an indication now arose, we had recourse to ablution, and he was about fifteen days from the date of his illness, before he could be said to be much better; from which time he recovered.

A boy, about ten years of age, was taken with the complaint; his heat never rose so high as in the former case, we therefore did not proceed with him beyond ablution; and the disease came on so insidiously, that even *that*

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was not applied until it had made some progress; he had now great stupor upon him, but was frequently roused as from a dream, delirious, and was with difficulty composed again; he was costive with distended belly, twice he appeared to be a good deal relieved by the operation of a suitable dose of pulv. scam. cum calomel; his head was shaved with the intention of putting on a blister, but its burning feel induced us for the present, to wash it only with vinegar and water; in a day or two it was covered with petechiæ, and a few were scattered on his body; his nose, which he was constantly fretting, bled a little, for two or three days together; from this time he became sensible, began to look up, and has had a slow, but perfect recovery.

Deafness in the progress of the complaint came on in all; the debility attending was very great; the erect posture in several of the patients could not be supported even for a few minutes on a nurse's knee. The progress of emaciation was very rapid, so that they, who when last observed were looking well, rose out of bed again mere skeletons, and on their first tottering steps out of doors, made a fearful impression on some of their more opulent neighbours.

In the two cases which I have given more in detail, cold seemed very evidently to be the remote cause of the fever; exposure to contagion directly, or indirectly, could not be made out; from whence, I am at present with those, who think that this agent, under certain circumstances and conditions of the body, may produce fever of debility.

All the patients took bark and wine, and opiates and opening medicines, as occasion required; but I am inclined almost to attribute every thing to the reduction of the temperature of the body by cold water; and I most gladly and confidently join in the opinion, that the true remedy for typhus is simple, and at hand; that it dwells in every fountain, travels in every stream, and murmurs in every rill.

A Practitioner *in Derbyshire.*

August 8, 1806.

To

To the Editors of the Medical and Physical Journal.

GENTLEMEN,

IN the last number of your Journal, I brought forward some proofs that the cow-pox originates from equine virus, contrary to the opinion of Dr. Kinglake. I now beg leave to add other instances, in which it seems to have arisen from the same cause. The first, which was communicated to me six years ago by Mr. Rankin, surgeon, of Eastbourne, was published in the year 1801, in the first volume of my Treatise on the Cow-pox.

Mr. Rankin was sent for to see a farmer, who had more than a dozen very large pocks, full of a semipellucid fluid, on his face and hands. They were elevated at the edges, and indented in the centre; and surrounded with a livid erysipelatous inflammation, and tumefaction. He had also a considerable degree of fever, a full quick pulse, violent headach, foul tongue, thirst, and much pain.

Mr. Rankin would not have been able to conjecture the cause of this disease, had not Captain Mowatt happened to shew him an account of Dr. Jenner's publication in a Review. On his next visit he inquired, whether any cattle on the farm had been affected in a similar way, and was informed, that a few days before the appearance of this disorder, the farmer had been dressing the heels of his horse for some scratches; and that some drops of a fluid from that part had spirted from the hairs of the heels into his face; which may be supposed to have had the greater effect on account of his having been just before shaved. This opinion was corroborated, by the circumstance of the pocks being particularly situated about the mouth and chin.

The sores were difficult to be healed; and the fever did not subside in less than a week. What renders it the more probable, that this farmer's complaint was occasioned by the cause here assigned, is, that his servant boy was affected in the same manner, though not so violently, and evidently from the same cause.

Mr. Tanner, the veterinary surgeon, of Rockhampton in Gloucestershire, applied some equine fluid to the teat of a cow, and produced the cow-pox; of which I have given an account in the publication before-mentioned; together with another case, seen by Mr. Henry Jenner, in which a boy, who first drew a string over the heels of a horse, and

afterward

afterwards across his fingers, caused an abrasion of the cuticle, and infected himself with the same disease. In the same work, I also mentioned three cases that had lately occurred, in which the cow-pox could be traced to the same source; one of them having fallen under the observation of Mr. Lawrence, surgeon, of Cirencester, and the others of Mr. Tanner.

In the same publication I ventured to express an opinion, that after the observations and experiments of Dr Loy, in addition to others previously made, no doubt could remain of the origin of this distemper. In the beginning of the year 1801, Mr. Loy, surgeon, of Pickering, saw an eruptive disease on the hands of a farrier, who had been dressing the heels of a horse, similar to that described by Mr. Rankin. It consisted of distinct vesicles, regularly circumscribed; they had a dark speck in the centre, and were surrounded with an inflamed ring.

This case also is a sufficient proof, that equine virus is not inert, as Dr. Kinglake supposes; and it is an additional proof of its activity, that it produced such an effect in this man, notwithstanding he had previously had the small-pox.

The next case occurred in a man who had not had the small-pox. Vesicles appeared on both hands, particularly about the roots of the nails, while he was in the habit of dressing the heels of a horse affected with the grease. The lymphatics were inflamed as far as the armpit; where a swelling took place. A pustule, similar to those on the hands, was produced near the eyebrow; occasioned by his scratching that part, and inoculating it with his finger. He had also a considerable degree of fever.

With virus taken from this man, Mr. Loy excited in the human subject a similar disorder, and one exactly resembling the cow-pox. Dr. Tierney remarks, in his Inaugural Thesis, published at Glasgow, in April 1802, that if one understanding was so clouded, or one mind so perverse, as not to be convinced of the origin of the cow-pock, by the substantial evidence before offered to the public, not a shadow of doubt could remain in the mind of any person, after the experiments of Dr. Loy, who had published an account of them the preceding year, together with the observations of Mr. Loy, and his experiment as already related.

Apparently, my friend Dr. Tierney was too hasty in his conclusion. Apparently, there are understandings so clouded, and minds so perverse, as not to be convinced

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of the origin of the disease, even by the evidence of Dr. Loy, together with the additional evidence that has been offered from different quarters, up to the present time. But having often conversed with those persons, whose understandings appeared to be so clouded, and whose minds appeared to be so perverse, I have uniformly found, that, like Dr. Kinglake, or the critics in Reviews, whatever was their learning in other respects, they were totally ignorant of every thing that had passed on the subject, except the unsuccessful experiments of Dr. Woodville, Mr. Simmons, and Mr. Coleman.

Dr. Loy inoculated the udder of a cow with the same virus; and produced a vesicle, surrounded with a margin, of a rose colour, attended with considerable induration and pain. The vesicle continued to increase for several days; and at length terminated in a scab. Two children were inoculated from this cow; and proved insusceptible of the small-pox.

Dr. Loy next inoculated another cow with limpid matter of grease; and the result was a vesicle, containing a watery fluid, of a purple tinge. A child was inoculated with this virus, and afterwards inoculated for the small-pox in three places, with the greatest care and attention; but resisted the infection of that disorder.

It is worthy of observation, that in this, and other instances related by Dr. Loy, so far from equine matter being inert, as supposed by Dr. Kinglake, the constitutional symptoms, though similar in kind, were more violent in degree, in their first and second remove from the horse. In five children, who were vaccinated from that, whose case was last mentioned, some trace of this virulence seemed to remain; but of the identity of its origin, there appears no reason to doubt, since they all resisted the infection of the small-pox.

Many of Dr. Loy's attempts to inoculate with the equine fluid proved unsuccessful. It is, however, proper to mention, that he inoculated three other cows with the same lymph that succeeded in the instance before mentioned; and excited in them all a similar disease. He is of opinion, that there are two species of grease; one local, and not infectious; the other infectious, preceded by fever and considerable indisposition, and relieved by a general eruption.

The following passage, in my publication before alluded to, is perhaps, alone, sufficient evidence on this head, to convince any rational man, that this is the origin of the cow-pock. "By a letter, dated Whitby, Dec. 26, 1802, Dr.

Dr. Loy informs Dr. Jenner, that the subject of his sixth experiment, who was inoculated with the matter of grease, has resisted the infection of the natural small-pox, although several times exposed. Several of those whom he had inoculated with vaccine virus, generated by inoculation with equine, have also been exposed more than once to the infection of the natural small-pox; but without effect.

"Dr. Duncan expressed a doubt, whether these persons had not had the small-pox previous to inoculation: but Dr. Loy affirms, that this supposition is perfectly groundless; and that the majority of them had never been within several miles of the small-pox, till after inoculation.

"That the variolous matter which he used was good, is evident from his having readily communicated the disease to others; and *many gentlemen of respectability in the neighbourhood can testify, that the experiments were fairly performed. One of them, at my request, saw me inoculate one of his cows from the greasy heel of his horse, with a lancet which he himself supplied me at the time of the experiment; and this experiment proved successful.*"

What can the most determined sceptic demand, or wish, more than this? How can folly itself expose itself more, than in expressing a doubt, or even a shadow of doubt, after this? The only way, in which I can account for the disbelief of any man in this case, is either to suppose that he is biassed by some preconceived notion; or that he has never read a single word on the subject.

It is true, men of the first celebrity have hesitated to believe this theory; but they were prejudiced by some previous representation of the case. Dr. Valentine, whom, when in England, Dr. Jenner referred to me for further information on this topic, confessed his doubt, and that of his countrymen, concerning it; but we must recollect, that they derived their early notions, as well as their early matter, from parties who were hostile to Dr. Jenner, and jealous of his fame.

> Quo semel est imbuta recens, servabit odorem
> Testa diu.

The many cases of coincidence between the occurrence of the grease in the horse, and the cow-pox, which have now come to the knowledge of Dr. Valentine, seem to have convinced him of the reality of its being the source of the disease. Accordingly, we find him adducing one remarkable case, in which it was transferred to the cow through the medium of another animal, and finally to the human subject; as I stated in your Journal for June, the very

very number in which Dr. Kinglake expressed his doubt on this subject. If to this we add the recent case that follows in the same number, in which were at least five eye witnesses of the fact, namely, Dr. Jenner, Dr. Adams, Mr. Tanner, together with the farmer and his servant, Dr. Kinglake appears to be placed rather in an awkward situation; and, I humbly conceive, must either yield his assent to the controverted hypothesis, or pertinaciously adhere to his original tenet with an ill grace.

The next case, which is also recorded in my Treatise, is one that was communicated to me by Dr. Jenner, and to him by Lord St. Asaph; who informed him, that when he read his publication, this was the only point which he thought not sufficiently proved. His Lordship accordingly made some inquiries in the county of Suffolk, where he resides. The person to whom he applied, was Mr. Harwood, of Battisford Hall; who declared that he *positively disbelieved* the fact.

A few weeks after, he called on Lord St. Asaph; and told him, that he had very unexpectedly obtained some information on the subject. Samuel Nunn and his wife, who had been servants to Mr. Harwood, having lately visited him, Mrs. Nunn alluded to some event which occurred when all the cows had sore udders; and when she herself suffered so much pain from a violent eruption on her hands and arms, the marks of which were still visible.

On hearing this, and recollecting the questions put to him by Lord St. Asaph, Mr. Harwood asked the husband, if he remembered whether any horse in his stable had at that time greasy heels. He replied, that he certainly did; and named the particular horse that had been so diseased. It appeared, that it was not this man's business to milk the cows; but he was then paying his addresses to his wife, and, after finishing his own work, part of which was taking care of the horses, he sometimes went to assist her. He himself was not infected; but of twenty cows in the dairy, not a single one escaped.

"These facts," says his Lordship, "were communicated to me by an avowed disbeliever in the the truth of your discovery; and obtained from persons who had never heard of Dr. Jenner, or vaccine inoculation; one of whom indeed had had the disease, without knowing it, or its name. I flatter myself such ignorance, in a short time, will no more be found; and that, in this instance at least, we shall not 'see nations slowly wise,' in availing themselves of the

invaluable advantages of the discovery; nor 'meanly just' to the merits of the man who made it."

The noble Lord was, however, too sanguine in his expectations. More than three years have elapsed since his letter was written; yet we still see nations, who are only 'slowly wise' in adopting Dr. Jenner's discovery, and only 'meanly just'—if at all just, in rewarding his merit.

In the same publication, I related other instances of successful inoculation with the matter of grease, by Dr. Sacco of Milan, and Dr. La Font of Salonica. The former affords the stronger evidence of the truth of this doctrine, on account of his having been at first sceptical on this point. He had also made a number of experiments, in order to decide the question, but in vain. At length, however, in consequence of a perusal of Dr. Loy's publication, he was induced to institute a new series of experiments; and the wetness of the season, which multiplied the sources of the virus, favoured his attempt.

His own servant, after dressing one of his horses labouring under that disorder, had five pustules on the forearms; but Dr. Sacco was not informed of the circumstance, till they were in a state of exsiccation. He tried the matter, but did not succeed.

This case, however, encouraged him to persevere in his efforts; which were at length crowned with success. A coachman, who had an eruption on his hands from the same cause, went to the Foundling Hospital at Milan; where several children were inoculated from him. On the same day Dr. Sacco also inoculated from him nine children and a cow. In the cow the infection failed; but in three of the children a pustule exactly similar to the cow-pock took place. From these Dr. Sacco repeated his experiments; and reproduced similar pustules to the fourth generation. He also submitted his patients to the test of variolous inoculation, which they bore with impunity; and hence he concludes, as every rational man, who is acquainted with the result of his experiments must conclude, that the grease is the origin of the cow-pock; and that equine and vaccine matter are the same.

These experiments were made in the presence of Dr. Malfatti of Vienna, and several other medical practitioners of Milan, Bologna, Pavia, and other parts of Italy, whom Dr. Sacco assembled on the occasion; all of whom concurred in opinion, that they afforded a complete confirmation of the theory of Dr. Jenner. He has, since that time, inoculated six other children with the matter of grease,

grease, and excited two pustules, possessing all the characteristics of the cow-pock. He is therefore of opinion, that equine matter, when genuine, is a security against the small-pox, without passing through the medium of the cow.

In a former part of this Journal, I stated the contents of a letter from Dr. De Carro, of Vienna; in which he informed me, that he received some of this equine matter from Dr. Sacco; and that he was every day inserting equine and vaccine matter with perfect indifference, being fully convinced of their identity. I also communicated similar intelligence from Dr. Friese, the Director of Vaccination in Silesia, who received his supply of equine virus from Dr. De Carro, being part of the stock of Dr. Sacco. It is described as viscid, and of a darkish hue.

Dr. La Font, who also succeeded in inoculating with the matter of grease, is a French physician of great learning and ingenuity at Salonica; to whom Dr. De Carro sent Dr. Loy's publication, requesting him to make as many experiments as possible with equine matter. From him we learn, that the farriers in Salonica are well acquainted with the grease; and that they divide it into three distinct species, the phlegmonous, the scrofulous, and the variolous. With this last species, supposing it to be the same with that of Dr. Loy, Dr. La Font commenced his experiments.

The horse from which he took the virus had been attacked with symptoms of fever; which ceased as soon as the eruption appeared. His fore-legs were much swollen. On the left he had four pustules; one on the heel, a second some inches higher, a third on the articulation, and a fourth near the breast. They resembled the small-pox; but there was no eruption in any other part.

He took matter from the upper pustules on the twelfth day, which was limpid, but rather yellow and filamentous; and inoculated a cow, but without success. He next inoculated a girl twelve years of age; in whom also the experiment failed, but it is probable she had had the small-pox. He then inoculated two boys with the same matter; and in each of them produced an affection resembling the cow-pock; but attended with rather more fever. But in the subsequent inoculations, the disorder assumed its usual mild form.

As a farther confirmation, if any farther confirmation can be necessary, of the evidence of Dr. Sacco, I subjoined to his account the substance of a letter from a Me-

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dical Delegation of the Department of Ancona to Sir Benjamin West, President of the Royal Academy; stating, that Mr. Birago, a surgeon of Milan, had met with a similar case; and the Committee of Vaccination in that city had ascertained by experiments, that the virus contained in the vesicles produced an affection in the human subject, bearing a perfect resemblance to the cow-pock.

The case of ——— Perry, in St. Ann's Court, which I published in the same work, still farther corroborates the truth of this hypothesis. When he lived at Anstey, in Hertfordshire, he was employed in dressing horses and in milking cows; in consequence of which he had the guardian pock, which has left marks behind, and secured him from the small-pox; but it is uncertain, whether he received the infection of that disorder from the horse or the cow. It should also be recollected, that in the two instances where the genuine cow-pox appeared in the neighbourhood of London, soon after the promulgation of Dr. Jenner's discovery, it appeared in two great dairies, where men are alternately occupied in the care of horses, and in milking.

Many other instances of this kind might be mentioned; but no one is more remarkable than the following. John Elstone, of Mifflin, in Gloucestershire, caught a disease resembling the cow-pox, from the heels of a horse, in the year 1777. In the year 1801, he was inoculated with active vaccine virus in both arms, by Dr. Jenner, but to no purpose; although the operation succeeded in thirty other persons, who were inoculated with the same matter, at the same time. He was inoculated again, after the expiration of a fortnight; but in vain. No other reason can be assigned for his insusceptibility of the infection of the cow-pock, but his having contracted this disease from the horse; since he had never had the small-pox, nor milked a cow.

In addition to this accumulation of evidence on the positive side, I shall, in your next Journal, bring forward some very strong evidence on the negative side, similar to what has already been adduced on various occasions. It was lately received by the Royal Jennerian Society from Mr. Dalton, of Arnee; and is contained in a letter from him, published in the Madras Gazette, and dated 11th August, 1805, in answer to some observations on the same subject in the Madras Courier.

August 19, 1806. JOHN RING.

(To be continued.)

To

To the Editors of the Medical and Physical Journal.

Gentlemen,

It has been a common, and certainly a too just complaint against your Journal, that the expressions in some controversial papers are much too severe. I am ready to admit, that, when two gentlemen expose themselves by the warmth with which they conduct their disputes, there are others who will feel gratified and amused at their expense. But, however entertaining this may be to the reader at first; a dispute managed without politeness soon becomes irksome; and such of the disputants as think the best and feel the most as they ought to do, will be the earliest at resigning the contest. So it is when two hackney coachman or two fishwomen quarrel: the bystanders are entertained, till at last vulgarity loses its force by losing its novelty. But if either of this description quarrels with one better bred, the latter instantly finds he is no match for one who trusts not to the justice of his cause, but to his recollection from the vocabulary of abuse. In consequence of this, the successful champion, fancying it is enough to vanquish his adversary, grows bold in proportion to his supposed prowess, till one, as brutal as himself, and with a stronger voice, convinces him that he also is vulnerable. It is true, this is not often the case; because, as "out of the abundance of the heart the mouth speaketh," so in general we find, that those who are thus indiscriminate in abuse, are composed of materials insensible to reproof of any kind.

This may, perhaps, be called a high charged picture; but it is on that account the more agreeable, to reflect how much your Journal is improved in so important a point, as may be seen by the manner in which a few papers have passed between some of your correspondents on the interruption to vaccination from herpetic blotches. Dr. Jenner's paper goes to show, that the interruption is various and uncertain, depending, among other things, on the period that the herpetic disposition has influenced the constitution, and that when such a state of the skin has become inveterate, it will sometimes be superseded by vaccination; in which case the latter will preserve its proper character. Mr. Clement and Dr. Wood have both afforded some very useful papers on the subject, and both have confirmed Dr.

 Jenner's

Jenner's observations,* and the remarks I ventured to make on the same, in the subsequent number of your Journal. † Dr. Jenner observes, that if the skin is affected by any form of herpes, vaccination will be either altogether prevented by it, or that if vaccination succeeds, it will alter the form and character of the former eruption, which will now partake of the vaccine character, and probably scab and disappear with it. Mr. Clement gives several good cases of the former, and Dr. Wood of the latter. Both the papers are equally valuable in these respects. Dr. Wood, in your number for July, gives a striking proof of one part of Dr. Jenner's observations: "Herpes," says he (page 68, No. 89,) *of very long standing*, did not in the least prevent the infection of cow-pox taking place, nor affect the appearance of the pustule. The constitutional action induced by cow-pox tends to remove the herpetic disease." Now, nothing can be a stronger proof of the truth of Dr. Jenner's position. "I do not mean," says that gentleman, "that the pustule is always imperfect, and not effective when the inoculated patient has this malady: on the contrary, it is sometimes perfectly correct, and much more frequently so when it has been *of long standing*, than when in its recent state; and what is remarkable, the disease is then, (when of long duration) sometimes swept entirely away."—These events, as I observed in the paper above alluded to, are perfectly consistent with what happens in many other constitutional complaints, which at one time prevent, and at others are superseded by, different morbid poisons.

The name of Dr. Wood reminds me of his former paper, in which he expresses a claim the public have on me, as physician to the Small-pox Hospital. That claim I am ready to admit; and from the moment I was thought worthy of such an office, no industry on my part has been wanting in the examination of that invaluable prophylactic which we owe to Dr. Jenner, and also of a disease, which, I trust, will hereafter be only known in books.—The epidemic small-pox of last year has furnished every practical trial that can be suggested. Dr. Wood's remark would not so long have remained unnoticed, had it been as new as he suspected. In the early stages of small-pox, however confluent, the antiphlogistic plan has been regularly pursued ever since the Suttons revived it. But the *confluent* disease should not be confounded with

* See Journal Vol. XII. p. 97. † Ibid. 194.

with the *sessile* accompanied with purple spots and extravasations of blood. These cases are attended with such instant and universal prostration of strength, that no one has had the hardiness to propose free evacutions of any kind. The general fatality of the disease in this form, might indeed authorize some boldness of practice, were it not that spontaneous hæmorrhage or diarrhœa is always found to accelerate the close of the tragedy.

The cold treatment, with early evacuations, in confluent small-pox, seems to have been first introduced by Sydenham; at least, it is not easy to trace it further back. But it appeared so much at variance with his theory of despumation, and of the necessity of dispelling the morbific matter by the skin, that his own admirers were among the first to abandon a practice, which nothing but the closeness of his observation would have induced him to employ. Mead, who was an advocate for purgatives, and rested his practice on the authority of Sydenham, with whom he was contemporary, confined his patients to bed in the early stage of the eruption.

It may seem strange, in a disease in which external cold is so serviceable, that the occasional use of the tepid bath should be found a most valuable remedy. Wherever there appears local conjestion, or strong vascular action, confined to an important organ, the tepid bath seems to act like a charm. In delirium, it has several times produced instant relief; and as far as could be judged by the event, has not exasperated the future progress of the disease.

Thus far I have trespassed on your sheets, that I might not appear inattentive to Dr. Wood's suggestions. In a few weeks I hope to offer the public the result of my remarks on this disease; on its analogy in some instances with the cow-pox, whilst it constantly preserves its own characteristic distinctions; on the nice shades which separate the two; and also the chicken-pox, and other exanthemata which, in their more violent forms, approach so nearly to the mild forms of small-pox. One remark, however, may be allowed me. Having on a former occasion acknowledged that I could not, in several instances, discover the characteristic appearance of the slough in small-pox, you will suppose I have not been backward in tracing the cause of this variety. It depends much on the progress of the disease, and the period at which the pustule is dissected. For some time past, since Mr. Wachsel and myself have had leisure to renew the search, we have not met with an instance in which the slough has not been easily

easily removed by the forceps (without destroying its figure) from the bottom of the foveola. I believe it will be found that wherever the bottom is sloughy, which is constant in most species of small-pox, that the slough may always be removed at a late period from the extremities where the suppuration is gradual, and the form of the pustule uninterrupted by early scabbing. I should not have troubled you on a subject which will soon appear before the public with a minuteness of detail inadmissable in your Journal, but as all this has reference to what has already been inserted by you, so much respect seemed due to your readers, and to the attention you have paid my former communications. I am, &c.

Berner's Street, August 15, 1806. JOSEPH ADAMS.

To the Editors of the Medical and Phyfical Journal.

GENTLEMEN,

ON July 12, I was sent for and consulted by a patient, attended by Dr. H. and Mr. L. of this town, labouring under excruciating pain from a retention of urine from stricture. I found him extremely irritable, pulse 110, weak, tongue dry, bowels regular; and also that he had taken freely of the ext. cicutæ and opium, as well as having been in the hot bath; that the catheter could not be introduced, nor a bougie; and from the history of the case, the patient, a captain of a vessel, living an irregular life, aged about sixty, and afflicted with this complaint for above fifteen years; that he had taken much medicine, particularly antispasmodics. The nature of the case did not allow of much delay, nor did he seem likely to be relieved but by an operation, which I was unwilling to perform, as neither of the above gentleman could be found. I therefore, at the earnest entreaties of the patient that I would do something for his relief, recollected a case Mr. Cline mentions in his Lectures, wherein the tinct. ferri muriati produced unexpected relief. I immediately procured some, which I began giving gt. v. every six minutes, in a little wine and water. After the third and fourth dose, the patient became quieter, and, in less than half an hour, some water passed without any pain. In one hour he had discharged above half a pint, and continued to do so for some time with great relief; the other medical gentlemen then arriving, a strong dose of opium was given, and he spent a tolerable night.

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I did not see him again for two days, when, upon being sent for, I found him reduced to the same deplorable state as before, although he had taken very large quantities of the cicuta and opium. We then repeated the tincture, and in less than two hours the man was again relieved by a discharge of urine. The first time he took about ninety drops, altogether; the last time about one hundred and thirty. I am, &c.

Swansea, August 14, 1806. JOHN CHARLES COLLINS.

To the Editors of the Medical and Phyſical Journal.

GENTLEMEN,

IN the character of one of the "*medical public,*" addressed by Dr. Bellamy, of his Majesty's ship Glory, in his publication of a most wonderful affection in perinæo, I beg leave, through the medium of your Journal, to make a few remarks on the statement of this naval practitioner.

Mr. Andrew Sharp, the unfortunate patient, Dr. B. informs us, came under his care on the 22d of January, 1806, for an affection in perinæo. This affection the Dr. states to have been some degree of enlargement, attended with considerable hardness and pain. We are not favoured with the most accurate anatomical description of the seat of the disease, nor its previous history from the time the patient first complained. It appears strange, that the medical gentleman should labour under any doubt, whether the tumour was chronic or acute.

On the 22d, he "*supposes*" it to be "*a chronic thickening, or enlargement,*" and that, "*probably,*" the prostate gland was diseased.

On the 23d, he admits that this "*chronic thickening was undoubtedly larger, more extensive,* and (although hardly perceptible to the eye, yesterday) *very apparent.* By way of nota bene, *he should not wonder to see* it the *foundation of a fistula.*

On the 24th, he is sorry that, notwithstanding his great exertions at an attempt to promote absorption, the *tumour increases very much:* he says, it is attended with a *degree* of *inflammation, great pain,* yet (wonderful to relate) "*no re-action of the circulation.*"

Give

Give me leave to ask Dr. Bellamy, whether inflammation ever existed in any degree without re-action and pain?

He says, "*looks and feels weak*;" I suppose he means the patient, and that he "*shall still persevere to repel*," and that for fear of a fistula. He orders for this purpose, the mercurial ointment and fomentation to be repeated: a sure mean of repulsion, no doubt! The fertility of Dr. Bellamy's mind in this instance must be apparent to every medical practioner.

On the 25th, "the tumour was still large, but not *pointed*." He says, fomentations give most relief, and admits the formation of matter, by hoping it will burst internally. The Dr. thinks this would save an external wound, or fistula. A very learned conjecture! He seems surprised that his patient has had no rigors during suppuration.

Do rigors always attend suppuration, even of more extent than Mr. Sharp's tumour seems to have been?

On the 26th, the "abcess is said to have been as large as a fist." The patient has "*considerable fever, not great nor any re-action of heat*."

What constitutes fever? Mr. Sharp, says the Doctor, is not aware of the seriousness of his case, because it has not been explained to him.

He adds, that he must now endeavour to promote suppuration, and keeps the "*patient rather low*," and continues the warm applications. The abscess burst in the evening, a day or two sooner than expectation; he does not tell us of this till the 27th, and remains silent, whether he was present at this juncture, and what steps he took. On the 27th, the day after the bursting of the tumor, the appearances were certainly singular. I refer the reader to the original. The practitioner did little more, he says, *than cleanse the sore*, and *reduce the swelling*. 'Twas only to day he discontinued the ung. hydr. The Doctor's remarks on the 28th, are so unprofessional, that I pass them over in silence. On the 29th an operation took place! no arterial saltus attended the hemorrhage! As to the division of the rectum, he speaks like a man void of anatomical knowledge. On the 30th, after many windings and turns, a great discovery is made of a fistula in perinæo, properly so called. The patient's health is said in one place to be good, and constitution strong, but in the evening it is marked with contradiction; notwithstanding the singular appearances on the 27th, it was only at a late hour on the 28th, that bark was commenced. It is painful and tedious to overrun this mass of absurdity. The symptoms,

 treatment,

treatment, and remarks, are of themselves so frivolous and absurd, and at the same time conveyed in such harsh language, that no man can read the case without pitying the writer. He displays in that trifling publication, a lameness too general in the navy.—I should be sorry to hurt the feelings of a whole class of men, by throwing out aspersions injurious to their character; but were I to relate in the most candid terms of equity and truth, what I have seen during my service in the royal navy, humanity would shrink at the tale. Yet there are some few in that service, whose zeal for the character they bear, and welfare of our brave seamen, has stimulated them to exertions highly honourable, namely, to know their duty, and to do it.

I am, &c.

W. CHALMERS, A. M. *Surgeon.*

Shorncliff Camp,
August 13th, 1806.

To the Editors of the Medical and Physical Journal.

Gentlemen,

TO expose error, to notice inconsistency, or to animadvert on what is imprudent, is an ungrateful task, and one which a candid and generous heart will always undertake with regret. It seems to indicate an asperity which is illiberal, a minuteness of investigation which is severe, and to display a triumph on the detection of imperfection not compatible with liberality. But these considerations should not prevent us from giving birth to the dictates of our judgment, or to the promulgation of that which may tend to the exposition of error, or to the elucidation of misconception. Dr. Bellamy, in relating his case of diseased bladder, has invited criticism by the strangeness of his language, the singularity of his practice, the originality of his reflections, and the ambiguity of his descriptions. This he has done so palpably as to render it irksome. I imagine him to have pursued a practice, I conceive to be improper, and to have hazarded remarks I believe to be erroneous.

My design is to comment on the former, and to refute the latter. To some it may appear invidious and unnecessary, but an enlightened mind will view it with candour and complacency. It is an attempt to counteract what may

may be injurious to the indolent or the ingnorant, who rely implicitly on whatever appears in print. Dr. Bellamy says, "Mr. Andrew Sharp, aged about thirty-eight, came under my care on the 22d of January 1806, for an affection in perinæo; a considerable hardness to be felt, and some enlargement to be seen at the root of the penis, or rather at the bulb of the urethra; *feels much pain when touched, and a good deal of internal distress, with sense of fulness and aching, even when the parts are at rest; a great deal more when he evacuates urine or stools; the former, runs off in a small narrow stream; does not stop, but requires a little time to begin.* An old complaint; was under my care about six months ago, then relieved by small mercurial frictions on the part; is *the effect believed of an old gonorrhœa some years ago, and by quacking with improper injections;* occasionally a little gleet; looks ill with it; there is no redness, or heat, *or sign of inflammation;* but supposed to be a *chronic thickening or enlargement:* probably the prostrate gland is diseased. Utatr. ung. hydrag. gr. v. bis in die part. affect. heri haust. cath. fotus com. et rep. p. r. n." It is obvious he had stricture, which being disregarded had occasioned these appearances and symptoms. Tumefaction in the perinæum and consequent fistula is a common consequence of neglected stricture.

Dr. Bellamy observes, there is no *sign of inflammation.*" Was there not every sign? Was not painful "*when touched, a good deal of internal distress, with a sense of fulness and aching when the parts are at rest,*" a demonstrable proof of inflammation? Could there be a better? Did not the event prove the fact? The Doctor supposes the swelling "to be *a chronic thickening or enlargement.*" Why *chronic?* Are *chronic* enlargements designated by "*much pain when touched, internal distress, and a sense of fulness and aching.*" Certainly not. Why mercurial friction was employed I cannot conceive. The perinæal affection was not venereal, why therefore have recourse to mercury? Admitting, for the sake of argument, though it exceeds credence, that mercury was indicated, of what use could *five grains* of mercurial ointment be rubbed twice a day upon a part *painful and inflamed?* The question would puzzle the Priestess of the Delphic God, were she skilled in surgery. The friction was alone sufficient to increase the inflammation, independent of the mercury, a medicine highly irritating. Its injurious effect is shewn on the 23d, when the "Swelling is undoubtedly larger, yet not hot or red, but more extensive, and very apparent, with a great

a great sense of fulness; pain in making water, but not interrupted, except being in a small stream, as is always the case with him, more or less; the physic acted well. R. Fotus, et ung. hydrag." The frictions are continued; and on the 24th "notwithstanding my attempt to promote *absorption,* the tumour increases very much, *and even with a degree of inflammation; great pain;* looks, and feels weak, pale, &c.;" still shall persevere to *repel,* for fear of fistula. R. *Ung. hydrag. fot. &c.*" Dr. Bellamy now admits there is inflammation.

By fomentations, I understand a warm application; and it is for me yet to learn, that warmth and mercurial ointment were probable means of repelling the inflammation, evidently the indication of cure. The Doctor speaks of absorption. To me this seems an ambiguous term. What wished he to absorb? The termination of the case proved the swelling to be no *chronic enlargement.* Indeed, how could it be a *chronic* one? Neglected stricture in the urethra had produced inflammation and tumefaction in the perinæum, and the object was to overcome the stricture (the exciting cause) by the cautious and repeated introduction of different sized bougies, and to remove the inflammation and swelling by cold water, leeches, and a strict observance of the antiphlogistic regimen. This would seem the only rational method of treatment, and to hold out the fairest prospect of success. But though the patient is pale and *weak,* the tumour *large,* with *inflammation* and *great pain,* Dr. Bellamy will still persevere to *repel* it, and use mercurial frictions. Let me be excused for recurring to a pratice so pertinaciously pursued. To repel inflammation the Doctor employs mercurial ointment. To *disperse* a tumour, *painful* and *inflamed,* he rubs upon *its surface five grains twice a day.* He does this to prevent suppuration and a fistula in perinæo. Could he have devised a method more likely to produce them? When blue ointment is rubbed on the thigh for a veneral purpose, does it not render the part red and uneasy, so much so as to induce the person to select another place for its application? Could it fail to have a similar effect in a swelling attended with apparent inflammation and great pain?

When did mercury ever subdue inflammation? It will cure a venereal action, but it was never known to lessen an inflammatory one. On the 25th, the "Tumour is still large, very painful all night, and *extremely sensible to the touch;* feels most relief by fomentation. *I rather hope* it

it will break internally, and thus save an external wound or fistula in perinæo; yet even this may cause destruction and find its way through; but on the whole, better so than fistula in perinæo. R. *Ungt.* fotus, &c."

These lines are pregnant with inconsistency and error. I must be permitted to dwell on, and examine them minutely, lest they should be disregarded and their fallacy remain unexposed. Dr. Bellamy hopes the abscess will "*break internally, and save an external wound or fistula in perinæo.*" Can the reader refrain from smiling? How could the abscess break *internally?* Into the *urethra* or into the *bladder?* Impossible! What was to become of the contained fluid? If the abscess could break *internally,* the matter must find its way into the *urethra* and the *bladder* by *ulceration.* Could vitality sustain an injury so deadly? How was the matter to be evacuated *without an external wound?* Was it to be drawn off by a catheter? Or was the bladder to be tapped? Yet that could not be intended, as the operation would require an *external wound.* I can give no satisfactory answer to my queries, and must refer to Dr. Bellamy for their solution. Pardon me, Gentlemen, for discussing what is absolutely impossible. The abscess could not break without an external opening. It was to be looked for; it was the only method of cure. The reverse, admitting the possibility, would have been mortal. The Doctor says, if the abscess does *break internally,* it "*may cause destruction, and find its way through; but on the whole, better so than fistula in perinæo.*" This observation must excite the laughter of every man, whose laughter is not suppressed by delicacy.

Dr. Bellamy seriously tells us, it would be better for a perinæal abscess to break internally, cause destruction, and ulcerate through parts essential to life, than to be opened in the perinæum, a part perfectly safe, and where the matter would have free egress, without inconvenience or danger. The idea of a fistula in perinæo appears to have been strangely terrific to his imagination. But surely, without reason; it is an unpleasant, but certainly not a remarkably serious disease. The mercurial frictions are this day employed. Dr. Bellamy used them to *repel* a swelling in perinæo. He fails in the attempt; and although he admits this swelling will *suppurate,* yet he continues their application. Can any thing be more inconsistent, or more pernicious in its tendency? In vain shall we seek a precedent for a practice that rubs mercurial ointment on a suppurating and a painful tumour.

On

On the 26th, the "abscess is very large, nearly as large as a fist, extending quite to the anus, and on its sides, a little thence up the perinæum, about two inches; *will probably contain more than a pint of matter; begins to fluctuate, feels soft and pointing.*" Now was the time at which a large opening should have been made by a lancet. But the Doctor, instead of doing this gravely, remarks, "Keep parts very clean, and him rather low; now must *promote suppuration*; *no hopes of absorption.* Appr. cataplasm a emoll. ter die cum fot. com. &c." Why "*promote suppuration*? Had not suppuration taken place? Certainly, Dr. Bellamy has said the tumour "*fluctuates, feels soft and pointing.*" Why, therefore, employ warm poultices to promote a process already completed? After suppuration they are prejudicial by relaxing the parts. On the *very day* the Doctor had relinquished all "*hopes of absorption,*" and attempted to "*promote suppuration,*" "the abscess broke," and by *ulceration* produced an opening large enough to "*admit the little finger.*" Does not this shew the eminent advantage that would have attended a free incision by the lancet?

Dr. Bellamy, in his subsequent description of the state of the parts, is so obscure, as to render himself unintelligible; and this compels me to comment on his daily reports much less minutely than I intended. After the abscess broke, a catheter was passed, "*tolerably easy,*" into the bladder. Why a catheter? Would not a bougie have been more appropriate, and less likely to occasion injury? Is it not singular, that no catheter or bougie was introduced previous to the swelling suppurating

On the 28th, it is remarked, "all I can do to prevent, is to keep the parts very clean, support the system, and watch the general health or *action of any virus.*" What *virus*? No venereal virus existed. What is meant by the "*action of any virus*? The catheter was again passed "but with much *more difficulty*; blood came through it from *evident obstructions at the curve of the urethra*; after *several attempts,* and *some force,* got into the bladder." These lines do no credit to the operator's prudence. It is never advisable to employ force in the introduction of a catheter. On the state of the abscess, where Dr. Bellamy speaks of "*a blackish brown eschar*" breaking through, and "*forming a second hole,*" and of its parietes "*being disorganized as if acted on by caustic,*" together with a sinus near the anus, I shall forbear comment; and simply suggest the possibility of all this being prevented by the relin-

 quishment

quishment of the mercurial frictions, and by a large opening with a lancet. The Doctor hopes "the destructive action of the abscess, though at first *excited by venereal cause*, and obstruction in the *urethra*, will not extend to destroy *its coats.*" How was the abscess "*excited by a venereal cause?*" By venereal, I understand syphilis. It will not be affirmed stricture or gonorrhœa are the consequence of lues venerea, or were ever considered as symptoms. How then can this gentleman, without an obvious dereliction of propriety, assert the abscess was *excited by a venereal cause?* He observes, the abscess at first, excited by "obstruction in the *urethra*, will not extend to destroy *its coats*: in fact, towards *it* the probe scarce passes." On reading thus far, it is evident that by "*its coats*" is meant those of the *urethra*. It cannot be otherwise. Now the urethra has *no* coats; it is one continued, smooth, vascular membrane. Dr. Bellamy says, it is "too soon yet to prognosticate or look to radical means; (could we look to radical means too early, when the state of the parts is considered?) continue still to cleanse, palliate, and reduce the active state and effects of inflammation by poultices, &c." "He is weak, reduced, and pale; begin the bark."

On the 29th, after much ambiguity of description, and originality of reflection, the Doctor remarks, it is in his patient's favour to have his mouth affected by the mercurial frictions; hence it is clear he believed the disease to have originated from lues venerea, and cannot accuse me of misrepresentation. How a man, pale, and weak by a large abscess, with sinus, and obstruction in the urethra, indisputably not produced by a venereal taint, could be benefited by a process not necessary, and unquestionably debilitating and distressing, far exceeds my comprehension.

Previous to the 30th, Dr. Bellamy has said, no urine passed by the abscess; but on this day, he informs us, about half an ounce was evacuated. He consoles himself, by observing, it was "a reasonable event to expect, there evidently existing narrowness of the canal, passing the catheter requiring *considerable* trouble. *The obstructions may be felt breaking down under it.*" Was not an opening made through the urethra into the abscess by the point of the catheter? Illiberality or invidiousness I disclaim, but truth demands the question. If I wrong Dr. Bellamy by the supposition, I am sorry for it; but if he wished to have prevented it, he should have been more guarded in his language.

language. He first speaks of the catheter passing "*tolerably easy into the bladder;*" next, with "*several attempts, and some force;*" and lastly, of its introduction "*requiring considerable trouble, and that the obstructions may be felt breaking down under it.*" The candid and enlightened reader will determine. To criticise further would be useless: two days afterwards the parts became gangrenous, and death would undoubtedly close the scene. I wait not to hear Dr. Bellamy's conclusion of this unfortunate case; my object was not to comment on its nature, but to notice his treatment and observations. Whether the bladder was diseased or not, is of little consequence. The exciting cause was doubtless stricture; and neglected stricture will occasion disease in the bladder. The Doctor cannot be offended at what I have written, or think I have taken any unfair advantage of his statement. His case was published "for criticism," and to criticism it has been subjected. I presume not to say his practice occasioned the melancholy issue of the case; probably the same might have occurred under any treatment; but I must aver, I do not believe his to have been agreeable to the rules of modern surgery. I may be mistaken, but I think Dr. Bellamy an old practitioner, and, no doubt, experienced and well informed; but he has, in this instance, appeared before the medical world under unfavourable circumstances, and committed himself to the mercy of those who, either from cynicism or utility, delight in criticism. I can assure this gentleman I have been actuated by no motive but those of candour and veracity. If the liberty I have taken excites his displeasure, it was neither my intention nor my wish; and, if I have derogated in personal respect to him, or made unbecoming comments on his paper, I ask his pardon, for it was diametrically opposite to my design.

I am, &c.

G. P. DAWSON.

Sunderland, August 10, 1806.

To the Editors of the Medical and Physical Journal.

Gentlemen,

THE following Letter is written with such "a spirit of politeness," that I could not but be highly pleased with it, and have no doubt but it will be acceptable to your numerous readers.

The

The pamphlet to which Mr. Dunning alludes, I had not seen, but I feel much gratified by such coincidence of opinion, drawn from practical facts.

I am, &c.

JAMES CLARKE,

Physician to the Nottingham Vaccine Institution.

Nottingham, Aug. 11, 1806.

To Dr. JAMES CLARK, *Nottingham.*

SIR,

I have just read your paper in the last Medical Journal, with very great satisfaction; the coincidence of your observations, with those of mine, detailed in the enclosed, which was published and pretty generally circulated in this neighbourhood, more than fifteen months ago, is indeed remarkable; and as I have no reason to believe that you have hitherto seen my paper, the two papers must be considered as remarkably corroborative and illustrative of each other. Reiterated experiments and observations have fully confirmed to me, that the principle which I have insisted on, is not a mere hypothesis, and certainly your valuable Report confirms, almost beyond the possibility of doubting, that my suggestions are founded in Nature and in truth.

A respectable surgeon in this town, lately re-vaccinated four subjects of ruptured vesicle, and he was led to make this experiment from the observations I had printed. In one of the four, the process went through all the stages of vesicle, erythema, induration, and scabbing, yet each of these stages was, perhaps, marked (for I repeatedly saw this experiment,) with some minute shades of difference, from cases of primary vaccination, but vaccinity certainly strongly characterized every part of this inoculation.—In the other three, a slight vesication, desiccation, and desquamation, rapidly succeeded each other, and disappeared in a few days.

Every occurrence of small-pox, after what I have ventured to term incomplete vaccination, has been very mild, and indisputably of a character modified by previous vaccination; and hence I have called these results, secondary variolæ. Allow me to say, that you are entirely at liberty to make what use you please of the enclosed, judging it

wholly

wholly unnecessary to make an apology for writing on a professional subject, to a Gentleman who appears to me to be animated by the most candid and liberal motives. I have the honour to subscribe myself,

Your most obedient humble servant,

RICHARD DUNNING.

Plymouth Dock, August 5, 1806.

Botanical Description of British Plants.

(Continued from pp. 165—171.)

Icosandria. Polygynia.

14. ROSA. *R. Spinosissima.*

Ang. Burnet rose. Pimpernel rose. *Var. with striped fl.* Ciphian rose.

Gen. Desc. Petals 5. Cal. urn-shaped, five-cleft, fleshy, contracted at the neck so as to form at length a coloured berry of one-cell, opening at top. Seeds many hispid, dispersed in the pulp.

Spec. Desc. *Germen* globular, smooth. *Stem* and leaf stalks thick set with awl-shaped, straight, horizontal, unequal prickles. *Leafits* small, circular, smooth, sitting. *Leaf scales* small, halberd-shaped, toothed. *Cal. leaves* v. entire. *Bloss* white, cream colour, or red. Prickles sometimes flat. *Heaths and sandy places.* BL. June, July.

Use. The ripe fruit is eaten by children: it has a grateful subacid taste. The juice of it, diluted with water, dyes silk and muslin of a peach colour: and with addition of alum, a deep violet; but it has very little effect on woollen or linen. Its dwarfish growth, and the singular elegance of its little leaves, which resemble those of the upland burnet, entitle it to a place in the flower garden.—*Withering.*

15. ROSA. *R. canina.—R. sylvestris vulgaris. Cynosbatus.*

Ang. Dog's rose. Hep tree. Wild briar.

Gen. Desc. As above.

Spec. Desc. *Germen* egg-shaped, smooth. *Stem* and *leaf-stalks* prickly. *Prickles* hooked downwards, broad, flat. *Leafits* 2 or 3 pair, with an odd one, pointed, serratures terminated by minute purple glands. *Leaf-stalks* sheathing; edges beset with purple glands. *Floral-leaves* 2, opposite fringed. *Petals* two-lobes, one larger, flesh-colour

colour, or red, sometimes nearly white. *Hedges, woods.* Bl. June.

Use. The flowers of the damask rose are *purgative*, those of the red rose *astringent*, and the fruit of the wild rose *pectoral*: they are all used in the preparations of the shops.—*Hill.* The fruit, called hipps, or hepps, has a sourish taste, and obtains a place in the London Pharmacopœia, in the form of a conserve; for this purpose the seeds and chaffy fibres must be carefully removed, for if these prickly fibres be not entirely scraped off from the internal surface of the hepps, the conserve is liable to produce irritation on the primæ viæ. This preparation, though formerly esteemed useful in many disorders, as dropsy, calculous complaints, dysentery, hæmorrhages, &c. is not now supposed to possess any medical virtue, but being agreeable to the taste, is well suited to give form to more active articles of the Mat. Med.—The moss-like prickly excrescence, called Bedeguar, or rose sponge, by the French Galle chevelue, found upon the branches of this tree, was formerly in great repute as a medicine in various diseases: it is the habitation of an insect, *Cynips rosæ.*—*Woodville.* The pulp of the berries beaten up with sugar, makes the *conserve of hepps* of dispensatory: mixed with wine, it is an acceptable treat in the North of Europe. The leaves of every species of rose, but especially of this, are recommended in *Eph. Nat. Curios.* as a substitute for tea, giving out a fine colour, a sub-astringent taste, and a grateful smell, when dried, and infused in boiling water. A perfumed water may be distilled from the blossoms, which, though commonly described as inodorous, have a faint fragrance. An infusion of the full blown blossoms of all the roses, but especially of the paler kinds, is *purgative*; but the petals of the red roses, gathered before they expand, and dried, are *astringent.*—Several birds feed upon the berries.—*Withering.*

16. Rubus. *R. idæus.*

Ang. Raspberry bush, or bramble. Framboise. Hindberry. Raspis.

Gen. Desc. Cal. five-cleft. Petals five. Styles from the top of the germens. Drupa clustered, one-celled, fixed to a conical receptacle so as to resemble a berry.

Spec. Desc. *Stem* shrub-like, upright, green, 2 feet high, biennial, bearing 2d year, prickly. *Leaves* winged, five or three leafits, serrated, cottony underneath. *Leaf-stalk* chanelled. *Fruit-stalk* hairy rough. *Bloss.* white. *Berry* red, or white. *Woods, hedges, moist mountains.* Bl. May, June.

Use. This fruit, which is commonly cultivated in our gardens, has a pleasant sweet taste, accompanied with a peculiarly grateful flavour, on account of which it is chiefly valued. Its medicinal virtues consist in allaying heat and thirst, and in promoting the natural excretions; but it seems less adapted to answer these purposes than many of the other summer fruits. A grateful syrup, prepared from the juice, is directed for use by the London Pharmacopœia.—*Woodville.* In the Isle of Skye the juice or a syrup of the fruit is frequently used as an agreeable acid for punch, instead of oranges or lemons. A distilled water from the fruit is cooling; and in *fevers* beneficial.—*Lightfoot.* The fruit, extremely grateful as nature presents it, is much improved in flavour by being made into a sweetmeat with sugar, or fermented with wine. It is fragrant, sub-acid, and cooling.—It dissolves the tartarous concretions of the *teeth*, but for this purpose, it is inferior to the straw-berry. The white berries are sweeter than the red, but they are generally contaminated with insects. The leaves are the favourite food of kids.—*Withering.*

17. Rubus. *R. fructicosus.* *R. vulgaris fructu nigro.*

Ang. Bramble. Blackberry-bush. Bumblekites.

Gen. Desc. *As above.*

Spec. Desc. *Stem* prickly, angular, very long, with runners spreading and climbing prodigiously, sometimes striking root. *Leaves* winged; 3 or 4 leafits, serrated, the uppermost on a leafstalk, the rest nearly sitting. *Prickles* alternate, strong, bowed back. *Petals* flaccid, white or purplish. *Fruit* black. *Hedges, woods.* Bl. June, Sept.

Use. A jam made of the berries has been found effectual in the *gravel* by the present Archbishop of Armagh, Ed. The berries when ripe are black, they have a pleasant flavor, and are commonly eaten by children: they taste well with wine.—The green twigs are of great use in dying woollen, silk and mohair, black.—*Withering.* Cows and horses eat it; sheep are not fond of it.—*Linn.* Silkworms will feed upon its leaves in defect of those of the mulberry. —*Stokes.*

18. Rubus. *R. chamæmorus.*

Ang. Cloud-berry. Bramble. Knot-berry. Knoutberry.

Gen. Desc. *As above.*

Spec. Desc. *Stem* scarcely 1 foot high, not prickled, with 1 flower: Diæcious. *Leaves* simple, lobed. *Bloss.* white

white or purple. *Berry* red. *Peat bogs, sides of mountains.* Bl. May, June.

Use. The berries are not unpleasant, and are esteemed an excellent *anti-scorbutic*, especially in Sweden and Norway: from the latter, large quantities are sent, packed in wooden vessels, to Stockholm, where they are served up as deserts, or made into tarts. The Laplanders bury them under the snow, and thus preserve them fresh from one year to another, digging them out in the spring as good as when gathered; they bruise and eat them with the milk of the rein-deer. In the Highlands of Scotland, they are also brought sometimes to table with the desert.—*Withering.*—*Lightfoot.*

19. Fragaria. *F. vesca.*

Ang. Strawberry.

Gen. Desc. Cal. ten-cleft. Petals 5. Seeds naked, smooth, on a receptacle, which is egg-shaped, coloured, deciduous, resembling a berry.

Spec. Desc. *Leaves* by threes, egg-shaped, serrated. *Runners creeping*, long, slender, smooth, often purplish. *Leafstalks* woolly. *Bloss.* white. *Fruit* red, or white. *Woods, hedge banks.* Bl. May, June.

Use. The root and leaves are *astringent*, and have been used as a *vulnerary*. The fruits will dissolve the tartarous incrustations of the teeth without acrimony: they have also a *diuretic* quality, and are useful in the *stone* and *gravel*. Hoffman recommends the use of them in *fevers* and *consumptions*; and Linnæus says, that by eating plentifully of them every day, he kept himself from the gout. A distilled water or wine, as well as the fruit itself, may be used in cases of the stone, and a syrup in fevers.—*Lightfoot.* The berries are grateful, cooling, subacid and juicy, and have a delightful smell; eaten either alone, or with sugar, or with milk, they are universally esteemed as a most delicious fruit; taken in large quantities they seldom disagree; they promote perspiration, impart a violent scent to the urine, and dissolve the tartar upon the teeth; used largely, they have afforded relief in the *gout* and *stone*; and Hoffman mentions their having cured *consumptions.*—Sheep and goats eat the leaves; cows are not fond of them; horses refuse them.—*Withering.*

The *Coccus Polonicus*, or Polish cochineal, is often found on the roots.

20. Potentilla. *P. anserina.*

Ang. Silverwood. Wild tansey. Goose grass. Goose-tansey.

Gen.

Gen. Desc. Cal. ten-cleft. Petals 5. Seeds roundish, naked, wrinkled, fixed to a small juiceless, spongy, tuburated receptacle.

Spec. Desc. *Stem* creeping. *Leaves* winged, serrated, silvery and white underneath; *leafits* curiously folding themselves up. *Fruitstalks* with 1 flower. *Bloss.* yellow. *Receptacle* hairy. *Sides of roads, low pastures where water has stood during winter.* Bl. June, July.

Use. The leaves are mildly *astringent*; dried and powdered, they have been given with success in *agues*; the usual dose is a meat spoonful of the powder every three hours between the fits.—The roots in the winter time eat like parsneps.—Swine are fond of the roots. Horses, cows, goats, and swine eat the leaves; sheep refuse them. —*Withering.*

21. Potentilla. *P. reptans. Pentaphyllum. Quinquefolium. Fragara fol. quin.*

Ang. Cinquefoil. Five-leaved-grass.

Gen. Desc. *As above.*

Spec. Desc. *Leaves* with finger-like divisions, leafits 5, or 3, or 7, ending in purplish points. *Stem* cylindrical, creeping, striking root. *Fruit-stalks* 1 flowered. *Flower scales*, spear egg-shaped, in pairs. *Bloss.* bright yellow. *Meadow banks, road sides.* Bl. June—Sept.

Use. The roots have a bitterish styptic taste, and were particularly recommended by Hippocrates for the cure of *intermittents;* with which intention they are said still to be employed by the peasantry.—*Ray.*

Its medicinal quality is confined to the external or cortical part of the root; and depending merely on its *astringent* effects, it has been prescribed *chiefly* internally in *diarrhœas* and other fluxes, and externally in gargles and astringent lotions; but being much inferior in efficacy to many other plants, it is now rarely used; in large doses, however, it may be found no bad substitute for some of the other astringents.—*Woodville.* The red cortical part of the root is mildly astringent, and *antiseptic*; a decoction of it is a good gargle for loose teeth and spongy gums.—Horses, cows, goats, and sheep eat it.—*Withering.*

Tormentilla. *T. officinalis. T. erecta. Potentilla tormentilla.*

Ang. Tormentel. Septfoil.

Gen. Desc. Cal. eight-cleft. Petals 4. Seeds roundish, naked, fixed to a small juiceless receptacle.

Spec. Desc. *Stem* trailing, somewhat ascending. *Leaves* sitting

sitting, beautiful green, 3 together. *Leafits* serrated. *Root-leaves* on leaf-stalks. Cal. 4 smaller segm. outside the other 4. *Petals* sometimes 5, fine yellow, an orange blotch at the base; claws very short. *Stam.* 14 to 18. *Pist.* 4 to 16. *Receptacle* woolly. *Moors, barren pastures.* Bl. June, Sept.

Use. The root, which is the only part used medicinally, has a strong styptic taste; it ranks with the most powerful vegetable astringents, and as such has long been held in great estimation by physicians; as the resin contained in it is very inconsiderable, it seems more particularly adapted to those cases, where the heating and stimulating medicines of this class are less proper, as *phthisical diarrhœas, diarrhœa cruenta,* &c. Dr. Cullen thinks "it has been justly commended for every virtue that is competent to astringents, he himself having witnessed several instances of its virtues, and particularly having found it, both by itself, and as joined with gentian, to cure *intermittents*; but it must be given in substance and largely," *M. M. ii.* 36. Rutty recommends a decoction either in wine or water, as an application to old putrid ulcers; as a restorative to the appetite, and of the tone of the stomach, and as a powerful medicine in bloody fluxes, fluor albus, and involuntary discharges of urine; it is used by some, he says, being held in the mouth, as a preservative against contagion in the epidemic dysentery, *Rutty, M. M.* 521. The root may be given in powder from half a drachm to a drachm for a dose, or more; but it is generally given in decoction, in the following form: 1 ½ oz. of the powdered root boiled in 3 pints of water to 1 quart, to which is added, towards the end of the boiling, 1 dr. of cinnamon; of the strained liquor, sweetened with 10 oz. of any agreeable syrup, 2 oz. may be taken four or five times a day. The extracts obtained by inspissation are intensely *styptic*, the spirit is more so. *Lewis, M. M.* 654. Tormentil is ordered in the *pulvis e creta compositus* of the London College. The astringency of the root is so great, that it has been substituted for oak bark in the tanning of skins for leather; and it has been observed, that the leather has been perfected in less time than when oak bark was used. *See Mus. Rust. v. ii. n.* 12. *p.* 51.—*Woodville.* The root consists of thick black tubercles, an inch or more in diameter, replete with a red juice of an astringent quality. In the Orknies they are used for tanning leather, and found superior to oak-bark; thus, they are first boiled in water, and the leather steeped in the liquor when cold. In the same islands a decoction of

of these roots in milk is often used with success in *diarrhœas* and *dysenteries*. Note, perhaps it might be better not to give it in dysenteries till the morbid matter be first evacuated.—A spirituous extract of the plant is recommended in the *sea scurvy* to strengthen the gums, and fasten the teeth.—*Lightfoot.* The roots are found, by farmers, very efficacious in the *dysenteries of cattle*.—They dye *red*. Cows, goats, sheep, and swine eat it; horses refuse it.—*Withering*.

23. GEUM. *G. Urbanum. Caryophyllata vulgaris.*

Ang. Common avens, or herb-bennet.

Gen. Desc. Cal. ten-cleft. Petals 5. Styles terminating. Seed with a jointed awn. Rec. pillar-like.

Spec. Desc. Stem angular. *Flowers* upright, yellow. *Fruit* globular, woolly. *Awns* hooked, bare. *Root-leaves* lyre shaped. *Steml.* in threes, jagged, toothed, unequal. *Germen* hairy. *Styles* smooth, purple, a double flexure towards the end. *Woods, hedges.* BL. July, Aug.

Use. The root, which is the part medicinally employed, has an aromatic and somewhat astringent taste, with a pleasant smell. Though little used in Britain, it is held in great estimation on the continent for various virtues, but chiefly as a *febrifuge*; numerous testimonies are borne by foreign physicians of its great efficacy in obstinate *intermittents*, many of which yielded to this root, after the Peruvian bark had failed. A tincture of this root, made in the proportion of 4 oz. of it digested with a quart of brandy in a sand heat, and given in the quantity of half an ounce or more, two, three, or four times a day, is said to have very rarely failed in the cure of agues. It has been given with equal success in decoction, powder, or electuary, in the proportion in which the Cinchona bark is commonly employed. This root has also been found a useful medicine in several chronic disorders, as a general *tonic* and *astringent*; and its *antiseptic* power is proved by Buchhave. *Abs. circa. rad. Gei. urb.* to exceed that of Peruvian bark.—*Woodville.* Infused in wine it is a good *stomachic*.—The roots, gathered in spring before the stem grows up, and put into ale, give it a pleasant flavour, and prevent its going sour.—Its taste is mildly austere and aromatic, especially when it grows in warm dry situations, but in shady and moist places it has little virtue. Cows, sheep, goats, and swine eat; horses are not fond of it.—*Withering.*

(To be continued.)

CRITICAL ANALYSIS

OF THE

RECENT PUBLICATIONS

ON THE

DIFFERENT BRANCHES OF PHYSIC, SURGERY, AND MEDICAL PHILOSOPHY.

Dr. Pinckard's Notes on the West Indies.

[Continued from p. 561—563.]

THE yellow fever, as it is generally called, appears to have engaged our author's particular attention. He seems to have omitted no opportunity of ascertaining its true character; and although he does not pretend to have discovered either its prevention or cure, we think he has suggested several useful hints respecting both these important objects; and his account of the symptoms, progress, and causes of this destructive scourge appears to us to be particularly accurate. Soon after the capture of Essequibo and Demarara this disorder made its appearance among the troops. The first soldier that was attacked, died on the sixth day after his admission into the hospital.

"The body was examined," says Dr. P. "with a view to ascertain the changes produced by the disease, but the appearances were not precisely such, as, from conversing with other practitioners, and reading a variety of authors, we had been led to expect. The stomach was found to be the organ which exhibited the strongest marks of derangement. The inner coat was surcharged with blood, appearing very red, and at one spot near the upper orifice it was of a livid hue, and its texture so weakened, that the finger was passed through it by only a slight pressure. I sincerely hope that frequent opportunities may not occur, but if, unhappily, they should, we shall avail ourselves of them, in the hope of ascertaining, correctly, what are the diseased appearances caused in the different viscera by this fatal malady.

"The name commonly given to this disorder would seem to be highly inaccurate. Our patient, although several days ill, had no yellowness of the skin, until a few hours before he died. If, therefore, his dissolution had occurred only a short time sooner; or if he had recovered previous to the period when this change of colour took place, we could not with any correctness have called the fever he had suffered a *yellow* fever, although he had undergone all the characteristic symptoms of the disease, so termed, except the casual one from which it has been improperly named. Moreover, affixing to a disease a name derived from a symptom, and particularly a symptom which is not always present, is calculated to deceive, and may be of dangerous tendency, by rendering the

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practitioner unsuspicious of the real nature of the disorder, until it is too late to check its destructive progress."

In a short time afterwards, Dr. P. had another opportunity of inspecting the body of a soldier who had fallen a sacrifice to the same disease.

" The appearances," he says, " were similar to those I had witnessed in the former case, except that, in the present instance, there were some striking marks of inflammation within the thorax. I shall further avail myself of the painful occasions that may occur, during my stay in this colony, in order that we may compare the cases with such as may be examined at Demarara during my absence, and after my return, in the hope that we may, thereby, be enabled to judge, with more accuracy, regarding the general appearances, and the actual changes induced by the disease.

" Since I wrote to you last we have had the misfortune to lose one of the soldiers by the disease called coup de soleil, or ictus solis. The poor man was on guard, and stationed as centinel to take his turn of duty for two hours at the gate of the fort, but before this short period had elapsed he was suddenly seized, fell down, and expired at his post. The day was excessively hot, and the perpendicular rays of the sun fell in their fullest ardor upon his head. Others of the men have likewise experienced the disease, but we have only, in this instance, seen it fatal.

" I may also mention to you a very remarkable and melancholy case of yellow fever which has occurred at fort William Frederic, affording a striking example of the nature of this afflictive malady. A grenadier, named Llewellyn, a handsome and well made man, of a robust figure, was brought into the hospital, complaining only of an uneasy sensation about the region of the stomach, which although indescribable, conveyed to him an early assurance of the fatal tendency of the disease, with which he was attacked. On asking him to explain his complaints, and the feelings which so alarmed him, he replied—" *I feel that I shall die,*" and placing his hand over his stomach, said he had " something there" that would soon kill him. We used all the means in our power to divert him from this desponding impression—but in vain! nothing he said could restore him, for he felt the hand of death upon him. He evidently laboured under an attack of the disorder, termed yellow fever; but, with the exception of this fatal sensation, no symptom was present which could have led to the apprehension of immediate danger. At my next visit on the following morning, I found him sitting up, and apparently somewhat relieved; but on my asking him how he was, he still replied—" *Dying! I feel that I shall soon be gone.*"—He continued perfectly rational and collected until the next day; when, alas! death but too surely confirmed the accuracy of his predictions. From the moment of attack he had felt assured, that nothing could save him! The indescribable feeling he complained of, seemed to induce a rapid exhaustion of the vital powers, while it formed, not only the leading feature—but almost the only symptom of the disease.

"Upon examination, we found the same redness of the inner coat of the stomach, which we had observed in all cases of the yellow fever, and in the lungs were some strong marks of recent inflammation."

About a month afterwards, when the Author's observations had been more diversified, he says:

"Not to fatigue you with a minute detail of the appearances, I may briefly observe, that in the stomach they have hitherto been uniform, but in the other viscera very uncertain and dissimilar. With respect to the symptoms of the disease, we begin to discover much instability. Either vomiting, low delirium, singultus, or coma, with or without yellowness of the skin, forms the prominent feature—each in its turn seeming to give the character of a distinct malady—but all terminating, within a few days, under the usual appearances assumed by our great common destroyer."

The following case shews the rapid fatality of this terrible disease: it occurred in the month of December.

"A few days ago, on my passing by the guard-house, I observed a grenadier, named Chapman, sitting among the men who were upon guard, seemingly unwell; and on my asking him if he was sick, he answered in a firm strong voice, that he felt "*a little poorly with head-ach, but not ill;*" still I perceived that he had more of indisposition about him, than he was aware of, and I was the more particularly led to notice any symptoms of disease in this man from his having been repeatedly an object of conversation and remark, in health. He was a hardy, robust grenadier, and from having been much exposed on fatigue-duty in Ireland, during the time of the sickness which the troops had experienced at Spike Island and at Cove; from having supported much of similar duty on the passage; and also a considerable share since his arrival in the West Indies, without suffering from it, the officers had pointed him out to me, as a person who was "secure against *even yellow-fever, and the doctors.*" He was sitting in his usual clothing, talking to the men of the guard, sensible only of slight head-ach, and lassitude: but as I saw evidently that it was an attack of fever, without mentioning this to him, I hinted that it would be better he should go to the hospital, if he was at all unwell, in order that he might have the benefit of medical attendance, and of such remedies as his case required. He instantly expressed great alarm, and said, "*I am not ill: if you take me to the hospital, I shall catch the fever and die.*"—On my stating the impropriety of his remaining among the well men, and not using the proper means of recovery, he replied, "*I am not sick, and only want an appetite to be quite well;*" and when I urged him further to go into the hospital, he answered with quickness, "*Indeed I am not bad, and if I was, I would rather stab myself at once, than go where so many are dying every day of yellow fever.*" Poor fellow! he was wholly unconscious, that the disease, he so much dreaded, was upon him—and as I found that his terror of the hospital was quite insurmountable, I did not augment his alarm, either by insisting upon

upon his being carried thither, or by telling him that the fever had already seized him; but in order that he might be removed from the guard-room, I gave directions for a hammock to be put up under the piazza of the house, where he might be in quiet and entirely alone. This being done, without delay, I prevailed upon him to go directly and lie down, and was glad to see him safe in bed; for, in my conversation with him, I had discovered enough to cause strong apprehensions lest he should die amidst the men of the guard, before we could have him removed! Although he felt so little of illness, and those around him were so wholly insensible of his peril, there was an indescribable something about him, particularly in his countenance, which bespake extreme danger; and from which the eye of experience might see that he was soon to die! After having him placed in the hammock, and prescribing for him such remedies as were necessary, I instructed the medical gentlemen, who had lately arrived at this post to give me assistance, to pay particular attention to his case, remarking, that from his present appearance, I should not be surprised if, in the course of an hour or two, I should learn that he was dead. The event verified my suspicion: a convulsive tremor of the muscles quickly seized him, and at noon he was a corpse! Such are the fevers of this climate! Often a man is well in the morning, and at night is no more: nor is it possible for any one, who has not seen many cases of the disease, to judge of the degree of danger which threatens those who are attacked."

Surgical Observations, Part the Second, containing an Account of the Disorders of the Health in general, and of the digestive Organs in particular, which accompany local Diseases, and obstruct their Cure: Observations on Diseases of the Urethra, particularly of that Part which is surrounded by the Prostate Gland; and Observations relative to the Treatment of one Species of Nævi Materni. By JOHN ABERNETHY, F. R. S. &c. 8vo. 1806.

IT always gives us pain if we object to the honest endeavours of enlightened men. No one can doubt the good intention or abilities of Mr. Abernethy; nor can it be questioned for a moment, that much useful information may be drawn from whatever he offers to the public. But it is impossible not to admit, that there is sometimes a degree of crudity in his performances, which is neither consistent with his large advantages, nor the length of time he has appeared as an author.

In the work before us he seems, by the motto he has chosen, to apologize for undertaking a department rather medical than chirurgical. For our own parts, we feel so thankful for information from whatever source, that we never scruple to attend to it; but it must occur to every one, that what may appear new and extraordinary to a surgeon, may be familiar to a physician, and vice versâ.* Thus Mr. Abernethy was probably more surprised than

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* See a Communication by Dr. Brocklesby, Med. Obs. & Enq. Vol. IV. p. 371.

than several of our Readers would have been, at discovering that many nervous complaints arise from hepatic affections; and that derangement of the organs of digestion would produce all the symptoms of pulmonic disease.

The first Chapter is "on those disorders of the system in general, and of the digestive organs in particular, which accompany local diseases, and which, whether they be sympathetic or idiopathic, considerably obstruct the cure of these diseases." We shall transcribe the words of the Author, to convince the Reader of our impartiality.

"An evil seems to me to have arisen from the artificial division of the healing art into the medical and surgical departments.—This division has caused the attention of the physician and surgeon to be too exclusively directed to those diseases, which custom has arbitrarily allotted to their care. The effects of local disorders upon the constitution, have, in consequence, been too little attended to; and indeed I know of no book, to which I can refer a surgical student for a satisfactory account of those febrile and nervous affections, which local disease produces, except that of Mr. Hunter. The reciprocal operation of constitutional disorders upon local diseases has obtained still less attention. To investigate more particularly some parts of these subjects, and to bring them forward to public notice, are the proposed objects of the present paper.

"No part of the animal body can be very considerably disordered, without occasioning a correspondent derangement of the whole constitution. Such disorder has been considered by Mr. Hunter as the result of universal sympathy. This consent of the whole constitution with its parts, manifests itself, in particular instances, by a greater disturbance of the functions of some organs than of others; and from this circumstance, these diseases have derived the appellations by which they are commonly distinguished. If the actions of the sanguiferous system be principally disturbed, and the temperature of the body subject to unnatural variations, the disease is termed fever: if the nervous system be chiefly affected, a state of vigilance or of delirium may be produced: convulsions and tetanus take place when the muscular system is more particularly disordered. Though the especial disorder of particular organs thus gives a character and denomination to the disease, it is sufficiently evident, in every instance, that the whole constitution is disturbed, and that parts of it are chiefly affected, perhaps from unknown circumstances relative to the nervous system, or it may be from a predisposition to disorder existing in the parts which are chiefly affected. It seems to be ascertained, that persons of particular constitutions are predisposed to those febrile actions of the sanguiferous system, which constitute the inflammatory fever; that there is a propensity to convulsions in children, and to tetanus in the inhabitants of warm climates.

"It

"It may be a fit subject for enquiry, whether it be possible for particular organs to become affected otherwise, than through the medium of the nervous system in general. Though some instances of sympathy are strange, and perhaps inexplicable, it must, I think, be admitted, that the inflammatory fever, the state of vigilance and delirium, convulsions and tetanus, which arise in consequence of injuries of the limbs, are produced by irritation imparted to the brain, which, by a kind of reflected operation, occasions a greater disorder of some organs than of others, and thus gives a character and denomination to the disease.

"That the stomach and bowels are disordered by injuries and diseases of parts of the body, has been remarked by various persons; but the subject has never been extensively surveyed, nor viewed with that accuracy of observation, which its high importance merits. It has been observed, that sprains of tendinous or ligamentous parts produce sudden sickness; and Mr. Hunter has attributed that shivering which is consequent to accidents, and attendant on some diseases, to the state of the stomach. It is also known that, in some local injuries from accident or operations, the stomach has appeared to be the part principally affected. But these remarks have been made only in a cursory manner; and it is my intention to examine the subject more particularly. The connexion of local diseases with the state of the constitution in general, also appears to me either not sufficiently understood or not duly regarded by the generality of practitioners; and to this subject I also mean to claim their particular attention. I shall in the first place select two cases, to shew how the stomach and bowels, or to speak yet more extensively, the digestive organs, may be affected from local disorder."

A Case follows, of a gentleman on whom the operation was performed, for an adherent omental hernia. The conseq uences of the operation, though conducted with the utmost caution, were great disorder of the constitution, with a full and strong pulse, furred tongue, great anxiety, restlessness, and total want of sleep. The stomach was particularly affected, being distended, uneasy on compression, and rejecting every thing that was swallowed. In this situation the patient very wisely refused to take any thing, excepting his remedies and water, till the irritability of his stomach ceased; after which all the symptoms subsided, and his medicines produced their proper purgative effect. We have chosen to place the events in this order, because we cannot ascribe the patient's relief to the operation of the remedies, but the operation of the remedies to the gradual cessation of the high irritability produced by the new state of certain parts. In the same manner we conceive Mr. Abernethy might easily explain the progress of other complaints after operations which he describes in a Note. "In these cases, (says he) opium fails to quiet the irritability of the stomach, and I have always considered it a primary object to produce secretions into the bowels, as I have observed, that

that if discharges can be produced per anum, the stomach becomes tranquil." That is, we should say, as the disease ceases the bowels obey the stimulus of the remedies exhibited.

Another Case follows, in which the stomach was violently affected by a local injury; and the author very truly observes, that such cases are very common. The stomach and brain are organs more easily affected than any other, and sympathize with almost every part of the body. This sympathy, in children, may often arise from teething; but our indolence is so apt to impute almost all diseases in infancy to this cause, that we think it was unnecessary to add to this too general resource among practitioners of most descriptions.

After this the author, without adverting to any particular disease, enters into a discussion of those nervous complaints which arise from a want of digestion, or a slow action of the organs subservient to that office. Among the diagnostics he points out, we are forced to admit that many are very fallacious. The colour of the fæces varies much in people who are in health, and how pale soever they may be one week, if no symptoms of ill health appear, we should not teach a patient of this description to concern himself about their complexion. The urine is still more uncertain, varying from day to day, nay from time to time, whilst no perceptible change appears in the state of the subject. We cannot omit a few other remarks in this passage.. "The cuticle of the tongue (says our author) sometimes seems to have lost its transparency, and to become permanently white in consequence of continued irritation." In this passage is there a proper distinction made between a furred tongue and a tongue naturally white? Does not that member vary in its complexion like the gums, which assume every shade from red to white coral?

"The extent of the power (it is added) which the intestines possess, of converting substances contained in them into chyle, or of preventing chemical changes, is unknown. It is probable that much unassimilated matter is absorbed by the lacteals, when the digestive powers fail in their functions. This is *demonstrably* the case in diabetes, where the vegetable matter floats in the serum of the blood, rendering it turbid, and afterwards combines so as to form sugar in its passage through the kidnies." We confess all this has not been demonstrated to our satisfaction.

Some good practical reflections follow, on the probable progress of chylification, and the office of the bile; but they are either not new, or not satisfactory. The author expresses his surprize, that when, during the slow progress of cancer or lumbar abscess, the various digestive organs have appeared deficient in their functions, he has not found any real disease in those parts by examination after death. But we should recollect, that in most tedious illness the patient finds himself incapable of any kind of application. Why then should we be surprised that the stomach or liver, or any other part, should at such times imperfectly perform its

its office any more than the brain? "It naturally excites surprize, (continues our author) that such a state of irritation and imperfect performance of the functions of those parts should exist for so long a time, as in many cases it is known to do, without producing organic disease; still I believe it may be set down as an axiom, and which will be verified by every observation I have made, that a state of irritation naturally leads to those diseased actions which produce an alteration of structure in the irritated parts." We sincerely wish this paragraph had been illustrated with some well marked cases, that had occurred often enough to induce so decided a mode of expression. The instances that follow, in which an alteration of structure was proved to exist, are cases where the intestines appear to have been primarily affected. Immediately after the above position too, we have an account of that class of diseases which are generally termed nervous, arising from anxiety, improprieties of diet, a sedentary life, or over exertions of any kind; at the close of which we are told, "it is indeed no wonder that the continual irritation of our unnatural diet should by degrees produce such disorders of the digestive organs." This is certainly very true; but we do not immediately see, how the remarks are connected with local diseases. That local will produce constitutional disease no one ever yet doubted, and also that a general good state of the constitution is often necessary for the cure of local complaints. It might therefore, we think, have been sufficient for the author to remind us of some strong cases, in which inconveniences had followed an inattention to such events, without the necessity of pursuing the subject for so great a length. If this had been thought necessary, we cannot help wishing, for our relief and the advantage of the reader, that more attention had been paid to arrangement, so that we might at least have known what we were to expect in a chapter by its superscription. It is not our intention to insinuate, that Mr. Abernethy's labours are useless; the work abounds with valuable suggestions, and the concluding cases are well selected, to show that a general ill state of health, arising from any cause, may counterfeit local disease.

The next Section contains Cases, with remarks, in which local disorders of the head, produced by blows, are kept up and aggravated by affections of the digestive organs. In this we meet with many good practical hints.

The third section is on diseases of the throat, skin, and bones, which so much resemble venereal complaints that they are frequently treated as such, but which take place without any reasonable ground to attribute them to the absorption of any morbific poison. The first was one of those sore throats which Mr. Hunter has described as sometimes mistaken for venereal, but which he remarks could not be such from the ulceration not being regularly progressive till mercury was exhibited. Another case is related, which in consequence of copper spots, was too hastily pronounced venereal

venereal by others, but which Mr. Abernethy cured by attending to the chylopoietic organs. Two others follow of thickened periosteum in those bones which are most frequently affected by the venereal virus. These however, by the manner in which they gave way to remedies directed to relieve the stomach and other viscera, were proved not to be syphilitic. Some judicious remarks follow these cases.

The fourth section is more miscellaneous in the nature of the local diseases which were relieved by attention to the digestive organs and to the general health. Many of the cases were indeed such as might be expected to yield to such treatment, being those indolent ulcers which are sometimes called scrofulous. Others were ill-conditioned ulcers, depending sometimes on poverty, bad treatment, or a local irritation, by degrees become habitual or chronic. These were all relieved by changes produced in the constitution. Two more important cases follow, much resembling cancerous breasts, which were relieved in a similar manner. This section concludes with the following remarks.

"Before I had paid attention to those complaints which arise from, or are aggravated by constitutional causes, I could not have believed that such considerable local diseases, after resisting various topical and general means, should give way so readily and completely to small doses of medicine. It is only by considering the manner in which this effect is produced, that the subject can be placed in a proper point of view.

"An attention to the state of the bowels is indispensably necessary, even in the common practice of surgery. A simple cut of the finger frets into a bad phagedænic sore, which resists every local remedy so long, that amputation is at last proposed. This is the consequence of bad health, which in its turn is aggravated by the irritation of the sore. The patient has a furred tongue, with other symptoms of disordered digestive organs. An attention to this disorder corrects the painful state of the sore, which now heals rapidly under simple dressings.

"A patient has a disorder in the urethra, almost too trivial for surgical attention; yet producing much inconvenience. The functions of the digestive organs are impaired, and he is hypochondriacal. He consults a physician, under whose care, his general health is amended, and he no longer feels or thinks of the local disease.

"An erysipelatous inflammation of the leg is imputed to some trivial cause; as for instance a gnat bite. It becomes worse under the common remedies. The health has been long declining, and the chylopoietic viscera are obviously deranged. The erysipelas is quickly cured by medicines prescribed for that disorder.

"A patient supposes that his knee is strained; for pain and inflammation of the joint suddenly come on, with deposition of fluid into the articular cavity; this attack is attended with fever, furred tongue, and unnatural discharges from the bowels. Leeches, cooling

cooling washes, and poultices, in short, all topical applications are unavailing. It is a case of rheumatic inflammation, for which a physician is consulted. Five or six weeks elapse without any abatement of the disease, the patient being almost unable to stir in bed. An alteration in the health suddenly takes place; the tongue becomes clean; and there is no longer any pain in the knee. All the fluid is absorbed from the joint in two days, and the patient walks about his chamber. Or there may actually have been some local injury; but the consequences are very considerable and violent, and quite incommensurate to the cause. Such occurrences can only be assigned by imputing the effects to the state of the health in general. I could relate a great number of cases to illustrate this subject, but it does not seem to me to need any further exemplification.

"I again repeat, at the conclusion of this section, that though I admit the possibility of the existence of diseases strictly local, and have adduced some instances of them, I consider the diseases, which I have been describing, to arise from disorder of the health in general, which is often caused, though sometimes merely aggravated, by disorders of the digestive organs; and it follows, if this view of the subject be correct, that such diseases may sometimes exist, without any manifest disorder of the digestive organs. The disorders of these viscera may act in a two-fold manner on the constitution; they may be the cause of an impure or imperfect state of the blood, and they may cause or aggravate nervous irritability. Whether in consequence of such effects they are to be regarded as the predisposing, as well as the exciting causes of such diseases as I have described, is an enquiry very worthy of investigation; but it does not appear to me to be determinable by the facts which have been recited."

The fifth section is on disorders of parts which have a continuity of surface with the alimentary canal.

"I had formerly observed spasmodic strictures of the œsophagus to disappear under various modes of treatment, in a manner which I did not understand. Mercury seemed to effect the cure in three instances. Many cases have occurred to me lately, in which the irritation in the œsophagus seemed to be first excited and afterwards maintained by disorder of the digestive organs. It will be readily allowed, that spasmodic strictures of the œsophagus, when long continued, may cause a thickening in the affected part of the tube, and thus the stricture may become permanent. One instance will be sufficient to illustrate and verify this view of the subject; indeed, I merely wish to excite attention to this subject, for I am incompetent to give an opinion as to the frequency or degree, in which affections of the stomach produce these disorders."

The cases which follow are very numerous, but we cannot feel satisfied that they all arose from a continuity with the alimentary canal, or were at all affected by remedies directed to those parts. That a case of ozæna should be suspended during a bilious attack is

quite analogous to what we often see of other local diseases, which for a time seem to cease on the access of any constitutional complaint. We should feel equally sceptical of the gentleman's case whose *pseudo-syphilitic* symptoms and deafness were relieved by a two months course of pil. hydrargyri. however gentle. Such a course has relieved so many chronic diseases of various descriptions that we see no reason to suspect that the cause of the disease was to be traced to the digestive organs, or that the cure should be imputed to the relief *they* experienced from the remedy. Indeed we are not certain, in this instance, what Mr. Abernethy's opinion of the case was, when he remarks that the digestive organs were disordered by the *effect of the poison.**

The subsequent remarks on ophthalmia contain nothing new.

Some cases follow, of diseases in various parts of the skin. That the skin is continued from the external surface over the whole intestines, we shall not dispute; but a chronic ophthalmia, or an herpetic state of the leg, if connected with the stomach, we should rather say was kept up by a general want of health, than by a continuity of surface from the intestines to those parts.

The sixth section is very important, inasmuch as it contains the information a practical anatomist "obtained by dissection relative to the causation of other diseases by those of the digestive organs." Here we are first reminded of the well-known sympathy between the stomach and brain, and the consequent nervous complaints produced by it; from which Mr. A. infers, that "such a state of irritation of the sensorium may lay the foundation of an excitement of the vascular structure of the brain, and thus very frequently produce organic disease." We confess ourselves not perfectly satisfied with this conclusion. The cases given by our author in confirmation are highly valuable, but to us not satisfactory in the conclusions drawn from them. Six subjects, whose cases were attended to during life, were opened after death; one died with apoplectic symptoms, and five with hæmiplegia. In all, the liver was greatly diseased and the bowels also. In three there was inflammation of the membranes of the brain, with a good deal of water in the ventricles. In two no morbid appearance of the brain could be discovered. All these cases show us how much we have to learn, but by no means convince us that the sympathy with the sensorium continued so long as to alter the structure or vascular action of the brain in the manner described.

The sixth chapter contains two useful cases (one of them in the author himself) illustrative of the importance of attending to the digestive organs under symptoms little suspected to arise from diseases in those parts; and concludes with a polite acknowledgment of the hints received from Mr. Boodle, to whom Mr. Abernethy acknowledges

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* This expression was addressed to the patient, but many readers, like ourselves, may be at a loss how to take it.

acknowledges himself obliged for being first directed to these considerations.

Such is the opinion we have formed of this work, of which we shall once more observe, that we regret it is not so good as it ought to be. At the same time we feel it our duty to acknowledge that the facts it contains are many of them too valuable to be laid by till one so much employed as the author, has leisure to arrange them for every class of readers. Another remark we would make relates to the language. There is throughout a playfulness of stile, and sometimes of words, which ill becomes physiology. Having made pretty free extracts we shall leave our readers to determine the justice of our objections to the style, but we think no one will justify the additional syllables in *morbific*, or *causation*, or conceive that our language is so barren as to render necessary the introduction of a term so undefined as *pseudo-syphilis*. These last are trifling objections, but as censors of medical literature we feel it our duty to mark them.

Two papers follow, one on diseases of the urethra, particularly that part which is surrounded by the prostate gland; the other, on the treatment of one species of nævi materni. They both contain good practical hints, but are not of a nature to be abridged.

Remarks on the ineffective State of the Practice of Physic in Great Britain, with Proposals for its future Regulations and Improvement, and the Resolutions of the Members of the Benevolent Society of Lincolnshire. By EDWARD HARRISON, M. D. *President of that Society;* F. R. A. S. *Edinburgh; of the Medical Society of London, &c.*

As this subject has for some time occupied the attention of a great number of professional gentlemen, it might appear inattentive to pass it over altogether. The principal thing deserving notice in the introductory part of the work is, that Apothecaries are not examined as well as Physicians and Surgeons. There cannot be a doubt that the regular apothecary would rejoice at any distinction which could be made between himself and the man who yesterday swept his shop, acquired the Latin names of a few drugs, and to day places his bottles with Arabic titles in his windows, talks more fluently on medicines, in proportion as he knows little, and promises with a boldness proportioned to the certainty, that he has no character to lose. All the various accusations brought by Dr. Harrison against the practitioners in his neighbourhood, may be true; but if they are, it is disgraceful to those who know it, that none of the perpetrators have been brought to condign punishment. It is a great mistake to suppose that any new laws are necessary for this. Half the public spiritedness which has blazed forth in this reforming zeal, would have taught these clamorous gentlemen that something may yet be done before it is necessary to apply to parliament. When all such measures have been ineffectually tried,

 then

then will be the time to apply for new laws, because we shall be able to plead practically, that the old ones are insufficient.

Commentaries on the Lues Bovilla or Cow Pox. By BENJAMIN MOSELEY, M. D. *Author of a Treatise on Tropical Diseases, of a Treatise on Coffee, and of Medical Tracts, &c. &c.*

WE should not have thought it necessary to take notice of this second edition, had it not been that our Journal affords, we believe, the only record of one of Dr. Moseley's cases, which he describes in the following words:

"Dr. Adams, of the Small Pox Hospital, has answered all objections made against the Cow Pox."

"I take the liberty to ask Dr. Adams, whether Elizabeth Harris, a young woman who had the Cow-pox two years ago, did not die of the confluent Small-pox, in the Small-pox Hospital, on the 7th of last month."

If the reader will take the trouble of perusing page 199 of our 14th vol. and also 353 of the same, he will see all the particulars of this case, and be convinced, as we were, that the woman never had Cow-pox.

An Account of the Practice of one of the Physicians of the Westminster General Dispensary, and of the Western Dispensary, from the 20th of July, to the 20th of August.

ACUTE DISEASES.	
Measles	2
Acute Rheumatism	6
Peripneumony	2
Pleurisy	1
Synochus	4
Typhus	2
Erysipelas	1
Catarrh	2
Cholera	4
Inflammation of the Parotid Gland	1
Acute Diseases of Infants	9
CHRONIC DISEASES.	
Asthenia	9
Cough and Dyspnœa	12
Pulmonary Consumption	6
Hæmoptoe	2
Chronic Rheumatism	7
——— Ophthalmia	2
Lumbago and Sciatica	3
Tic Douloureux	1
Epilepsy	1
Paralysis	2
Jaundice	4
Colic	2
Diarrhœa	9
Bilious Vomiting	2
Gastrodynia	8
Dyspepsia	4
Scirrhous Liver	1
Dropsy	2
Cephalalgia and Vertigo	6
Hypochondriasis	3
Worms	4
Psora	2
Prurigo Senilis	1
Lichen Simplex	1
Herpes	1
Psoriasis Syphilitica	1

Chlorosis

Chlorosis	- -	1	Leucorrhœa	- -	4
Dysmenorrhœa	-	1	Abortus	- - -	3
Prolapsus Uteri	-	1	Uterine Hæmorrhagy		1

The summer has, hitherto, been favourable to health, though some individuals, more particularly exposed to the influence of the weather, have suffered from rheumatism and pulmonary affections, in consequence of the frequent rain and variable temperature. The thunder-storms and heavy showers in July, cleared the atmosphere of noxious particles, and caused a refreshing coolness, which in large towns, where a great portion of the population is excluded from fresh air, is highly beneficial.

Were shopkeepers, clerks, mechanics, and other descriptions of men, who are confined during the day, to walk abroad in the evening, instead of crowding together in taverns and ale-houses, summer complaints would diminish, and the moral and physical happiness of society materially improve. Games of every kind performed in the open air, and consistent with decency and propriety, should be encouraged; whilst they contribute to render the mind cheerful, they cherish the social affections, add vigour to the corporeal powers, and man thus rises in the scale of excellence.

Bathing, in particular, should be insisted upon; it strengthens the system, and by giving a gentle stimulus to the whole surface of the body, occasions a pleasurable excitement; the temperature is reduced to the natural standard, and cleanliness, a very certain promoter of health and comfort, is effected. Dispensary-Physicians, in their visits to the poor at their own dwellings, have ample opportunity to observe the consequences of long wearing the same clothes, loaded with dirt, and impregnated with animal matter; of living in close habitations, crowded with people, and swarming with vermin, where filth accumulates to a degree of insufferable offensiveness. These consequences cannot be too generally known; they lay the foundation for putrid diseases, the exciting cause has only to present itself, and the victim is ready; the constitution enfeebled, offers no resistance; they multiply the miseries of the poor in health, and by their depressing debilitating power predispose to disease, which, under such circumstances, is always more fatal and alarming; children are born to perish before they are conscious of existence; and cutaneous diseases of every description swell the catalogue of evils. I have seen four children from one to seven years of

of age, entirely naked, their bellies tumid, and their skin of a mud colour, lying upon a miserable mattrass on the floor, which at night also received the wretched parents.

In country towns, where the inhabitants enjoy the benefit of a running stream, men and boys are generally in the habit of frequent bathing; it is not unusual to see the numerous workmen of a large manufactory solacing themselves, after the labours of the day, in the limpid element. In a metropolis teeming with population, the boundaries being so immensely extensive, the difficulty of many people being able to go the necessary distance to the river, is obvious; and where every avenue is thronged with modest females, the gratification of a luxury, repugnant to delicacy, cannot be tolerated. This inculcates the necessity of public baths being established on liberal principles. There are already a sufficient number of baths for the use of the affluent; these, however, from their expence, are inaccessible to that class of people which is most in want of ablution, the call of hunger being much more imperious than the love of cleanliness. The want of so necessary an indulgence to the poor has been frequently urged, yet statesmen, who acknowledge that the strength of a nation consists less in the number than in the virtue and efficiency of the people, have hitherto neglected a very important means of rendering them more healthy, more cleanly, and of consequence more virtuous. We no longer live in an age when the magnificence of public works is derived from individual liberality; we do not now, as in ancient Rome, expect a man to rescue his name from oblivion by erecting stupendous aqueducts, or constructing baths, where, to use the language of Gibbon, "the meanest citizen could purchase with a small copper coin, the daily enjoyment of a scene of pomp and luxury, which might excite the envy of the kings of Asia." For the structure of such costly edifices we must, therefore, interest the philanthropy which so eminently distinguishes the opulent inhabitants of London; and when the utility of bathing is demonstrated, and the want of means to accomplish it is made known, doubtless, a subscription sufficiently ample may be raised, and the sanction of Government to an undertaking so patriotic, be obtained.

S. FOTHERGILL.

Southampton Street, Strand, Aug. 21, 1806.

Account

Account of Diseases in an Eastern District of London, from July 20, to August 20, 1806.

ACUTE DISEASES.	
Typhus Mitior	3
Ephemera	4
Rubeola	3
Ophthalmia	6
Epilepsia	1
Hemiplegia	1
Cephalalgia	5
Vertigo	4
Rheumatismus Chronicus	17
CHRONIC DISEASES.	
Tussis	12
Dyspnœa	7
Tussis cum Dyspnœa	5
Phthisis Pulmonalis	8
Enterodynia	6
Diarrhœa	16
Hæmorrhois	4
Dysuria	3
Fluor Albus	7
Procidentia Vaginæ	1
PUERPERAL DISEASES.	
Ephemera	6
Mania	1
Menorrhagia Lochialis	5
Stranguria	2
INFANTILE DISEASES.	
Aphthæ	3
Convulsio	1
Diarrhœa	6
Ophthalmia Purulenta	1
Pertussis	6

Disorders of the bowels have been frequent, and have appeared more early this season than usual. Diarrhœa has occurred oftener than any other intestinal disease. This has, in some instances, been so mild, as not to require any medical attention; and in most cases, where but little pain is felt, and where the discharge from the bowels continues in a moderate degree, it may be considered in the light of a salutary effort of the constitution. In those cases, where medical aid has been necessary, to assist the bowels in the expulsion of accumulated fæces, by gentle eccoprotics, or, if necessary, by more active remedies, it has been found a more effectual mode of relieving the patient, than to check the discharge by the use of astringents and opiates.

MEDICAL AND PHYSICAL INTELLIGENCE.

Mr. John Shawe, surgeon, at Liverpool, has communicated to us a very effectual remedy for that species of inflamed eye, commonly called Egyptian ophthalmia. The following is an extract from his letter. "We had ophthalmia very prevalent here last summer; I believe it was very general throughout the country;

try; the inflammation was unusually great, and extremely obstinate; the pain in the eyes almost insupportable, and particularly in attempting to open them, apparently as if sharp sand, or some rough substance was pricking of them; the tears felt very hot in trickling down the cheeks. Suddenly I became a sufferer, and for the first time in my life I had ever felt the pain of inflamed eyes. From the general description, it is one and the same called Egyptian ophthalmia. It occurred to me, that some mucilaginous body might relieve, by uniting with the tears and blunting their acrimony. Accordingly, I prepared some mucilage of quince seeds, and had it dropped into my eyes. The instant relief that followed this application exceeded my expectation, and far surpassed every means I had heard or tried before; the pricking sensation was eased almost instantly, and the eyes could be moved with freedom. This will suffice, without giving you the number, or any long history of others, who have received equal benefit. I have tried the mucilage of gum arabic and linseed, but without any benefit. Whether any peculiar property may be in the acid of the quince seeds uniting with the tears, and correcting their alkaline action, I do not presume to give my opinion, and shall leave that to the superior judgment of your Readers."

Original Vaccine Pock Institution, Broad-street, Golden-square.

At a Meeting, held on Tuesday, June 24, 1806; in consequence of adverse Reports, it was

RESOLVED,

1. That the Medical Establishment are of opinion that the Cow-pock Inoculation, under the regulations of this Institution, according to their experience, is decidedly advantageous over that of the Small-pox.

2. That since the offered reward of Five Guineas to any person who *has been certified*, not one has applied in consequence of a failure.

3. That in general, persons decline to accept the certificate, on account of their own experience shewing the security after vaccination, on living with patients ill of the Small-pox.

4. That as, in a small proportion, persons considered to have been duly vaccinated have taken the Small-pox, it is thought proper to grant certificates to those only who have been tested at this Institution.

5. To give further satisfaction, and considering that the vaccine disorder is a new morbid affection which requires investigation, (one of the great objects of this Institution) it is requested that any persons who apprehend they may have taken the Small-pox, or have any disorder from vaccination, will apply to the Board, any Tuesday or Friday, at one o'clock, to execute the design of a faithful publication of accumulated evidence.

The

The Autumnal Course of Lectures at St. Thomas's and Guy's Hospitals will commence in the following order:—

St. Thomas's Hospital.—Anatomy, and operations of surgery, by Mr. Cline and Mr. Cooper, Wednesday, October 1, at half past one.—Principles and Practice of Surgery, by Mr. Cooper, on Monday, October 6, at eight in the evening.

Guy's Hospital.—Practice of Medicine, by Dr. Babington and Dr. Curry, on Wednesday, October 1, at ten in the morning. Principles and Practice of Chemistry, by Dr. Babington and Mr. Allen, on Thursday, October 2, at ten in the morning.—Theory of Medicine, comprehending Pathology, Therapeutics, and *Materia Medica*, by Dr. Curry, on Friday, October 3, at eight in the evening.—Physiology, or Laws of the Animal Economy, by Dr. Haighton, on Monday, October 6, at a quarter before seven in the evening.—Midwifery, and Diseases of Women and Children, by Dr. Haighton, on Monday, October 6, at eight in the morning.—Clinical Lectures on Select Medical Cases, by Dr. Babington, Dr. Curry, and Dr. Marcet, from November till May.—Besides these, during the winter, a course of Lectures on the Structure and Diseases of the Teeth, will be given by Mr. Fox, Surgeon-Dentist; and one on Veterinary Medicine, by Mr. Coleman, Professor at the Veterinary College. These several Lectures are so arranged, that none of them interfere with the others in the hours of attendance; and the whole is calculated to form a complete course of medical and chirurgical instruction. Terms and other particulars to be learnt from Mr. Stocker, apothecary to Guy's Hospital, who is also empowered to enter gentlemen to such of the Lectures as are given at Guy's. Dr. Babington and Dr. Curry, take this opportunity of informing those gentlemen who have attended their Lectures on the Practice of Medicine within the last four years, that their Syllabus on that subject is now finished, and ready for delivery. Such gentlemen, then, as have received a part of the work, will get the remainder by applying at the Hospital, either personally, or through their friends, and stating how much is wanting to render it complete.

The Autumnal Courses of Lectures delivered at the London Hospital will commence on the first of October.—Theory and Practice of Physic, by Dr. Cooke.—Chemistry, by Dr. Hamilton, and Dr. Yelloly.—*Materia Medica*, by Dr. Frampton.—Theory and Practice of Midwifery, by Dr. Dennison.—Clinical Observations on Surgical Cases, by Sir William Blizard and Mr. Thomas Blizard.—Anatomy, Physiology, and the Operations of Surgery, by Mr. Headington and Mr. Frampton.—Anatomical Demonstrations and Dissection, Principles of, by Mr. Armiger.—Surgery, by Mr. Headington. Further particulars may be known by applying to Mr. Price, apothecary, at the Hospital.

Medical Theatre, St. Bartholomew's Hospital.—The following Courses of Lectures will be delivered at this Theatre the

the ensuing winter.—On the Theory and Practice of Medicine, by Dr. Roberts and Dr. Powell.—On Anatomy and Physiology, by Mr. Abernethy.—On the Theory and Practice of Surgery, by Mr. Abernethy.—On Comparative Anatomy and the Laws of Organic Existence, by Mr. Macartney.—On Chemistry, by Dr. Edwards. —On Midwifery and the Diseases of Women and Children, by Dr. Thynne.—The Anatomical Demonstrations and Practical Anatomy, by Mr. Lawrence.—The Anatomical Lectures will begin on Wednesday, October 1, at two o'clock, and the other Lectures in the course of the same week.—Further particulars may be known by applying to Mr. Nicholson, at the Apothecary's shop, St. Bartholomew's Hospital.

UNIVERSITY OF GLASGOW.

The Medical Lectures in the University of Glasgow will begin on Tuesday the 4th of November, at the following hours:

Dietetics, Materia Medica, and Pharmacy, by Dr. MILLAR, at ten o'clock, forenoon.

Midwifery, by Mr. TOWERS, at eleven.

Theory and Practice of Physic, by Dr. FREER, at twelve.

Anatomy and Surgery, by Dr. JEFFRAY, at two o'clock, afternoon.

Chemistry and Chemical Pharmacy, by Dr. CLEGHORN, at seven.

Clinical Lectures on the Cases of Patients in the Royal Infirmary, on Thursday evening, the 13th of November, at six o'clock. The first Lecture by Dr. FREER.

Dr. BROWN will begin his Lectures on Botany, about the beginning of May next.

Theatre of Anatomy, Great Windmill-Street.

Mr. WILSON will begin the winter course of his Lectures on Anatomy, Physiology, Pathology, and Surgery, on Wednesday, Oct. the 1st, at two o'clock, as usual. A room will likewise be opened for Dissections, from nine in the morning till two in the afternoon, from the 10th of October till the 20th of April; where regular and full demonstrations of the parts dissected will be given, where the different cases in surgery will be explained, the methods of operating shewn on the dead body; and where also the various arts of injecting and making preparations will be taught.—The plan and terms of the course may be had in Great Windmill-street.

Mr. BROOKES will commence his Autumnal Course of Lectures on Anatomy, Physiology, and Surgery, on Wednesday, the 1st of October, at two o'clock, at his Theatre, Blenheim Street, Great Marlborough Street. The Dissecting Rooms will be open from eight o'clock in the morning till two, where Mr. Brookes attends.

Dr. BADHAM'S Lectures on Medicine and Chemistry will be commenced on Friday, 10th of October, at eight o'clock, at No. 15, Clifford-street, Burlington Gardens.

Dr. BRADLEY will commence his Autumnal Curse of Lectures on the Theory and Practice of Medicine, on Monday the 13th of October next, at Whitehall.

Dr.

Mr. A. Carlisle, F. R. S. F. L. S. and Surgeon to the Westminster Hospital, intends to deliver a Course of Lectures on the Art and Practice of Surgery, in all its branches, during the present season, at his house in Soho-square.

An Introductory Discourse, (open to all Students) comprising the plan of these Lectures, will be given on Monday, the 13th of October, 1806, at seven o'clock in the evening. And the lectures will be continued on Mondays, Wednesdays, and Fridays, at the same hour.

Dr. Clarke and Mr. Clarke will begin their winter course of Lectures on Midwifery, and the Diseases of Women and Children, on Monday, October the 6th, at the Lecture Room, No. 10, Upper John-street, Golden-square. The lectures are read every day, (Sundays excepted) from a quarter past ten o'clock in the morning till a quarter past eleven, for the convenience of Students attending the Hospitals.—For farther particulars apply to Dr. Clarke, No. 1, New Burlington-street; or to Mr. Clarke, at his house, No. 10, Upper John-street, Golden-square.

In the first week of October, will commence a Course of Lectures on the Practice of Physic, Therapeutics, and Chemistry, in the Lecture-room, No. 9, Great George-street, Hanover-square, (removed from Leicester-square,) at the usual morning hours, viz. the medical lectures at eight, and the chemical at a quarter after nine o'clock; by George Pearson, M. D. F.R.S. senior physician of St. George's Hospital, of the College of Physicians, &c. A register is kept of Dr. Pearson's Cases in St. George's Hospital, and an account is given of them every Saturday morning, at a Clinical Lecture, at nine o'clock.

Dr. Reid's Winter Course of Lectures on the Theory and Practice of Medicine, will commence on the 20th of October next, at his house, No. 6, Grenville Street, Brunswick Square, where Particulars may be had.

Mr. Home's Lectures on the principal Operations of Surgery, given gratuitously to the Pupils of St. George's Hospital, will commence in October next as usual.—Mr. Gunning will likewise give Lectures on the Lues Venerea, &c.

Mr. Gunning, Surgeon Extraordinary to his Royal Highness the Duke of Sussex, and Surgeon to St. George's Hospital, will commence his Course of Lectures on the Principles and Practice of Surgery, at his house, No. 43, Conduit-street, Hanover-square, on Monday, October 13, at seven o'clock in the evening. Further particulars may be known by applying to Mr. Gunning, in Conduit-street, or at St. George's Hospital.

Mr. Thomas's Autumnal Course of Lectures, on the Theory and Principles of Surgery, will commence, as usual, early in October. Particulars may be known at his house, Leicester Place, or at the Anatomical Theatre, Windmill-street.

Mr.

Mr. Moor, Surgeon Dentist to her Royal Highness the Duchess of York, will commence a course of Lectures on the Structure and Diseases of the Teeth, some time in November, in which will be explained the complete practice of the Dentist.

Mr. Thelwall's Course of Evening Lectures, on the Physiology of Elocution, or those parts of the animal œconomy that are connected with the phenomena of Speech, and on the nature, causes, and treatment of Impediments, will commence on Wednesday, October 1, at his house in Bedford Place. They will be preceded by a preparatory series of Literary Lectures, which will commence in the second week of September, and will be nine in number. It is the object of Mr. T's longer course, to treat in a popular way, every part of the extensive subject of Elocutionary Science, and Elocutionary Accomplishment:—the highest graces and excellences of which, as well as the simplest requisites of intelligible facility, he professes to trace from fundamental principles of physical and musical science. The Scientific Lectures will be delivered every Wednesday and Friday; the critical and oratorical portions of the subject, every Monday evening. For the accommodation of such students, as are desirous of taking up the subject in a more profound and abstract point of view, morning Lectures are also intended to be delivered to select classes: and as there are parts of the subject that may be expected to be particularly interesting to medical students, arrangements will be made to interfere as little as possible with other branches of professional study. Mr. T. continues to give private instructions to pupils, who are afflicted with impediments of enunciation, or with feebleness, dissonance, or other defects of voice.

The Society for bettering the condition of the poor, have the satisfaction to find that contagious fever has scarcely made its appearance in the metropolis during the last two years.

Dr. Adams's second edition of his work on Morbid Poisons is nearly printed off.

LIST OF NEW MEDICAL PUBLICATIONS.

A Treatise on Vaccine Inoculation; to which is added, an Account of the Chicken Pox, and the Hives; with an Appendix, containing Letters from Physicians and Surgeons of eminence respecting the present State of Vaccination in many Cities and principal Towns of the United Kingdom. By Robert Willan, M. D. F. A. S. &c. &c. 4to. 15s. boards.

A Letter to the Editor of the British Critic, occasioned by some Remarks in that Review on a Book intitled "Cases of Pulmonary Consumptions, and treated with Uva Ursi," by the Author. 1s.

TO CORRESPONDENTS.

Mr. Fowler, of Melton Mowbray, wishes to learn where he may find the Report of the Case, in which the worm lozenges produced excessive salivation, mortification, and death.